This is a translation of the AwSV notification draft from 2015. It had not been officially approved and is for information purposes only. There are differences to the AwSV version that entered into force on 01 August 2017, however these do not involve the classification procedure.

Ordinance on facilities for handling substances that are hazardous to water [German designation:] (AwSV)[1])[2]) dated … [date of issue]

Following consultation with the relevant stakeholders, the Federal [German] Government decrees the following on the basis of § 23(1) points 5 to 8, 10 and 11 and paragraph 2, in conjunction with § 62(4) and § 63(2) sentence 2, of the Water Resources Act, of which § 23(1) and § 62(4) have been amended most recently by Article 1 points 4a and 8 of the Act of 6 October 2011 (Federal Law Gazette I p. 1986):

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[1] This ordinance serves to transpose:
- Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327 of 22 December 2000, p. 1), as last amended by Directive 2009/31/EC (OJ L 140 of 5 June 2009, p. 114),
- 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 December 2006, p. 36), and
- Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (OJ L 375 of 31 December 1991, p. 1), as last amended by Regulation (EC) No. 1137/2008 of the European Parliament and of the Council of 22 October 2008 (OJ L 311 of 21 November 2008, p. 1).

[2] Notified under number 2014/XXXX/D (2013/0423/D) in accordance with Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on Information Society services (OJ L 204 of 21 July 1998, p. 37), as last amended by Article 26(2) of Regulation (EU) No. 1025/2012 of the European Parliament and of the Council of 25 October 2012 (OJ L 316 of 14 November 2012, p. 12).

Chapter 1

Purpose; area of application; definitions

§ 1

Purpose; area of application

(1) This ordinance serves to protect bodies of water from detrimental changes to their characteristics caused by substances that are hazardous to water emanating from facilities handling these substances.

(2) This ordinance shall not apply to

1. the handling of substances that are non-hazardous to water as published in the Federal Gazette,
2. non-stationary facilities and facilities not used in a stationary manner in which substances that are hazardous to water are handled, as well as
3. underground storage facilities pursuant to § 4(9) of the Federal Mining Act.

(3) This ordinance shall also not apply to aboveground facilities with a volume not exceeding 0.22 m^3 in the case of liquid substances or with a mass not exceeding 0.2 tonnes in the case of gaseous and solid substances, if said facilities are located outside of protected areas and defined or provisionally secured flood plains. § 62(1) and (2) of the Water Resources Act remains unaffected. Facilities as per sentence 1 do not require a determination of suitability pursuant to § 63(1) of the Water Resources Act.

(4) Moreover, this ordinance shall not apply if the volume of substances that are hazardous to water is negligible, as long as they are being handled together with other substances in a facility over the facility's entire duration of operation. At the request of the operator, the competent authority shall determine whether the prerequisite pursuant to sentence 1 is satisfied.

§ 2

Definitions

(1) The definitions under paragraphs 2 to 33 shall apply to this ordinance.

(2) "Substances that are hazardous to water" are solid, liquid and gaseous substances and mixtures that are capable of causing detrimental changes to the quality of water, either permanently or to a not insignificant degree, and that are classified as hazardous to water according to the conditions in Chapter 2 or are deemed to be hazardous to water.

(3) A "substance" is a chemical element and its compounds, either in natural form or obtained by means of a manufacturing process, including any additives necessary to maintain its stability and impurities caused by the method applied, but not including solvents that can be separated from the substance without impairing its stability or altering its composition.

(4) A "mixture" is made up of two or more substances.

(5) "Gaseous" refers to substances and mixtures which

1. have a vapour pressure in excess of 300 kilopascals (3 bar) at a temperature of 50 degrees Celsius, or
2. are completely gaseous at a temperature of 20 degrees Celsius and a standard pressure of 101.3 kilopascals.

(6) "Liquid" refers to substances and mixtures which
1. have a vapour pressure of less than 300 kilopascals (3 bar) at a temperature of 50 degrees Celsius,
2. are not completely gaseous at a temperature of 20 degrees Celsius and a standard pressure of 101.3 kilopascals, and
3. have a melting point or begin to melt at a temperature of 20 degrees Celsius or less at a standard pressure of 101.3 kilopascals.

(7) "Solid" refers to substances and mixtures that are not gaseous or liquid.

(8) "Fermentation substrates of agricultural origin for obtaining biogas" include
1. plant-based biomasses from agricultural base production,
2. plants or plant components that accumulate in agricultural, forestry or horticultural operations or in the context of landscape maintenance, as long as they have not been used for other purposes in the interim,
3. plant remnants from the production of beverages, as well as remnants from the processing of agricultural products such as fruit, grain and potato slump, as long as no substances that are hazardous to water are added during processing and the hazard level is not raised during processing,
4. silage seepage, and
5. animal excrement such as liquid manure, slurry, solid manure and poultry droppings.

(9) "Facilities for handling substances that are hazardous to water" (facilities) are
1. self-contained and stationary units, or units used in a stationary manner, in which substances that are hazardous to water are stored, drawn off, handled, manufactured, treated or used in the industrial sector or in the field of public institutions as well as
2. pipeline facilities as per § 62(1) sentence 2 of the Water Resources Act.

Units are deemed to be stationary or used in a stationary manner if they are operated for longer than 6 months at a single location for a particular operational purpose; facilities may consist of several plant sections.

(10) "Drum and container storage facilities" are storage facilities for mobile containers and packages, the individual volume of which does not exceed 1.25 m^3.

(11) "Fuel oil consumer installations" are storage facilities and also usage facilities in the industrial sector and in the field of public institutions,
1. which serve to heat or cool residential, business and other work spaces, or to heat water,
2. whose annual consumption of light fuel oil (fuel oil EL) in accordance with DIN 51603-1, publication date: August 2008 (available from *Beuth Verlag GmbH*, Berlin, and archived at the *Deutsche Nationalbibliothek* [German National Library]), other light fuel oils of equivalent quality, liquid triglycerides or liquid fatty acid methyl esters does not exceed 100 m^3, and
3. whose containers are not filled more than 4 times a year.

Emergency power systems are deemed to be equivalent to fuel oil consumer installations.

(12) “Petrol stations for own consumption” are storage facilities and facilities for drawing off

1. which cannot be accessed by the public,
2. which are intended for supplying fuel to vehicles and machines that are used for related operations,
3. which do not dispense more than 100 m^3 annually, and
4. which are only operated by the operator or persons appointed and instructed by the operator.

(13) "Liquid manure and slurry installations or silage seepage facilities" (JGS-facilities) are facilities used exclusively to store or draw off

1. commercial fertilisers, especially slurry or solid manure, within the meaning of § 2 sentence 1 points 2 to 4 of the Fertilisation Act,
2. liquid manure within the meaning of § 2 sentence 1 point 5 of the Fertilisation Act,
3. animal excrement of non-agricultural origin, also combined with litter or in processed form,
4. liquids which accumulate during the production or storage of silage as a result of cell disruption or applied pressure and which predominantly consist of a mixture of water, cell sap, organic acids and microorganisms, as well as any precipitation (silage seepage), or
5. silage or ensiled material if silage seepage can accumulate in this regard,

(14) “Biogas facilities” are

1. facilities for manufacturing biogas, especially feed tanks, fermenters, condensate tanks and secondary fermenters,
2. facilities for storing fermentation residues or substrates provided they are closely connected, spatially and functionally, with the facilities under point 1, and
3. facilities for drawing off belonging to the facilities pursuant to points 1 and 2.

(15) “Underground facilities” are facilities in which at least one part of the facility is below ground; parts of the facility are deemed to be below ground if

1. they are fully or partially embedded in the earth or
2. are embedded in components that are directly in contact with the earth in a manner that is not completely visible.

All other facilities are aboveground. Aboveground also refers, in particular, to facilities whose retention systems are partially embedded in the earth, as well as containers whose flat bases are in full contact with the ground below or are mounted on supporting structures which are in contact with the ground below.

(16) “Retention systems” are parts of facilities for retaining substances that are hazardous to water which escape from leaky parts of facilities intended to enclose the aforementioned substances. These include, in particular, collection areas, collection pans, catchment basins, collecting devices, pipelines, protective pipes, containers or surfaces which retain substances in or on them, or in or to which substances are diverted.

(17) “Double-walled facilities” are facilities consisting of two separate walls, the space between which is designed to be a monitoring space that is equipped with a leak detection system which indicates leaks in the inner and outer walls.

(18) “Areas for drawing off or handling” are parts of a facility which, during drawing off or handling, can be loaded with substances that are hazardous to water in the event of a

malfunction, plus the drainage and storage areas and partitions separating them from other areas.

(19) “Pipelines” are fixed or flexible lines for conveying substances that are hazardous to water, including their fittings, mountings, conveyor units, flanges and sealants.

(20) “Storage” is the retention of substances that are hazardous to water for further use, discharge or disposal.

(21) "Ground basins" are basins built in the soil or erected in the form of embankments for the storage of liquid manure, slurry and silage seepage which consist of earth in the floor and slope area and which are sealed with damp-proof membranes in relation to the soil.

(22) “Drawing off” is the act of filling containers or packages with substances that are hazardous to water.

(23) “Handling” is the act of loading and unloading ships where this involves loose substances that are hazardous to water and the transfer of said substances in containers or packages from one means of transport to another. Handling also includes the temporary parking of containers or packages containing substances that are hazardous to water in a handling facility associated with transport.

(24) “Intermodal transport” comprises the transport of goods within the same loading unit or road vehicle involving two or more carriers, in which connection the carriers are changed but the goods being transported are not handled.

(25) “Manufacturing” is the act of producing and obtaining substances that are hazardous to water.

(26) “Treatment” is the act of influencing substances that are hazardous to water in order to alter their properties.

(27) “Use” is the application, utilisation and consumption of substances that are hazardous to water while making use of their properties in the industrial sector and in the field of public institutions.

(28) “Establishment” is the act of setting up, installing or inserting facilities and parts thereof.

(29) “Maintenance” is the act of performing upkeep to ensure that a facility remains in proper condition. “Repair” is the restoration of this condition.

(30) “Decommissioning” is taking a facility out of service on a permanent basis.

(31) “Significant alterations” to a facility are measures that alter the facility’s structural or safety-related features.

(32) “Protected areas” are

1. water protection areas pursuant to § 51(1) sentence 1 points 1 and 2 of the Water Resources Act,
2. areas for which a preliminary order has been issued in accordance with § 52(2), in conjunction with § 51(1) sentence 1 point 1 or 2, of the Water Resources Act, and

3. mineral spring protection areas as per § 53(4) of the Water Resources Act.
If the additional zone of a protected site is divided into sections, only its inner area shall be regarded as a protection area; if zones are demarcated differently to protect against qualitative and quantitative impairments, then the demarcations relating to protection against qualitative impairments shall apply.

(33) “Experts” are individuals appointed by expert organisations recognised in accordance with § 53 who are authorised to inspect and assess facilities.

Chapter 2

Classification of substances and mixtures

Section 1

Basic principles

§ 3

Basic principles

(1) According to the provisions of this Chapter, substances and mixtures that are handled in facilities are classified as non-hazardous to water, or into one of the following water hazard classes, based on the degree of hazard they pose:
Water hazard class 1: slightly hazardous to water,
Water hazard class 2: obviously hazardous to water,
Water hazard class 3: highly hazardous to water.
Paragraphs 2 to 4 shall not be affected.

(2) The following substances and mixtures are deemed to be hazardous to water in general and are not classified into water hazard classes:
1. commercial fertilisers, especially slurry or solid manure, within the meaning of § 2 sentence 1 points 2 to 4 of the Fertilisation Act,
2. liquid manure within the meaning of § 2 sentence 1 point 5 of the Fertilisation Act,
3. animal excrement of non-agricultural origin, also combined with litter or in processed form,
4. silage seepage,
5. silage or ensiled material in which silage seepage can accumulate,
6. fermentation substrates of agricultural origin for producing biogas, as well as the liquid and solid fermentation residues that can accumulate during fermentation,
7. floating liquid substances that are published in the Federal Gazette by the Federal Environment Agency in accordance with Appendix 1 point 3.2, and mixtures which consist solely of such substances, as well as
8. solid mixtures subject to a different classification in accordance with § 10.
By way of deviation from sentence 1 point 8, a solid mixture is non-hazardous to water if the mixture or substances it contains have been published by the Federal Environment Agency in the Federal Gazette as being non-hazardous to water in accordance with § 6(4) or § 67. Solid mixtures that are not expected to cause detrimental changes to the properties of bodies of water, especially on account of their origin or composition, shall also be regarded as non-hazardous to water.

(3) The following shall be regarded as non-hazardous to water:

1. substances and mixtures that are intended or which can be expected to be absorbed as foodstuffs, and
2. substances and mixtures intended as animal feed, with the exception of ensiled material and silage, if silage seepage can accumulate therein.

(4) As long as substances and mixtures are not classified according to the conditions laid out in this chapter or as per § 67, they shall be deemed to be highly hazardous to water. This shall not apply to substances and mixtures which come under paragraph 2 or 3.

Section 2

Classification of substances and documentation; decision on classification

§ 4

Self-classification of substances; exceptions; documentation

(1) If an operator intends to handle a substance in a facility, he must classify said substance as being non-hazardous to water according to the criteria laid down in Appendix 1 or allocate it to a water hazard class pursuant to § 3(1).

(2) The self-classification obligation as per paragraph 1 shall not apply to

1. substances pursuant to § 3(2) and (3),
2. substances whose classification has already been published in the Federal Gazette according to § 6(4) or § 67,
3. substances that belong to a group of substances whose classification has already been published in the Federal Gazette in accordance with § 6(4) or § 67,
4. substances which the operator deems to be severely hazardous to water, regardless of their properties, as well as
5. substances which are handled in containers or packages during transportation.

(3) The operator shall document the self-classification of a substance in accordance with Appendix 2 point 1 and submit this documentation to the Federal Environment Agency.

(4) If the operator believes that the classification of a substance according to Appendix 1 does not sufficiently represent the danger it poses to the water, he may propose a different classification to the Federal Environment Agency. In addition to the documentation pursuant to paragraph 3, all documents required to assess the different classification must be enclosed with the proposal.

§ 5

Inspection and review of the documentation; groups of substances

(1) The Federal Environment Agency shall inspect the documentation relating to the self-classification of substances for completeness and plausibility. The Federal Environment Agency may require the operator to augment or correct missing or implausible statements.

(2) Furthermore, the Federal Environment Agency shall review the quality of the documentation relating to the self-classification of substances on a random basis. In doing so, the selected documentation shall be reviewed using inspection reports, literature and other suitable documents. For the purpose of conducting the review, the Federal Environment Agency may obligate the operator to provide evidence of the statements documented pursuant to § 4(3) and (4) using existing documents and documents at his disposal.

(3) The Federal Environment Agency may consolidate substances into groups of substances and classify the latter.

§ 6

Decision on classification; publication in the Federal Gazette

(1) The Federal Environment Agency shall decide on the classification of substances and groups of substances based on the results of the inspections and reviews pursuant to § 5(1) and (2). The following aspects may also be taken into consideration while making the decision:

1. one's own existing findings or evaluations, in particular on toxicity, the mobility of a substance in the soil, movement in the groundwater or accumulation in the sediment, as well as
2. existing opinions of the Commission for the evaluation of substances that are hazardous to water as per § 12(1).

(2) The Federal Environment Agency may also take a decision on the classification of substances and groups of substances in accordance with paragraph 1 sentence 2, independent of the operator's self-classification.

(3) The Federal Environment Agency shall announce its decision pursuant to paragraph 1 sentence 1 to the operator in writing; paragraph 4 shall not be affected by this.

(4) The Federal Environment Agency shall publicly announce its decisions in accordance with paragraph 1 sentence 1 and paragraph 2 in the Federal Gazette. It shall also provide a search function on the internet that can be used to ascertain existing classifications of substances that are hazardous to water and groups of substances.

§ 7

Changes to existing classifications; duty of notification

(1) If the Federal Environment Agency obtains findings that may necessitate changes to a classification pursuant to § 6(1) or (2), it shall conduct a reassessment and change the classification if necessary. § 6(3) and (4) shall apply accordingly.

(2) If the operator obtains findings that may result in a change to the published classification of a substance or group of substances, it must inform the Federal Environment Agency in writing of these findings forthwith.

Section 3

Classification of mixtures and documentation; verification of classification

§ 8

Self-classification of liquid or gaseous mixtures; documentation

(1) If an operator intends to handle a liquid or gaseous mixture in a facility, he must classify said mixture as being non-hazardous to water according to the criteria laid down in Appendix 1 or allocate it to a water hazard class pursuant to § 3(1).

(2) The self-classification obligation as per paragraph 1 shall not apply to

1. mixtures as per § 3(2) and (3),
2. mixtures whose classification has been published in the Federal Gazette in accordance with § 67,
3. mixtures in relation to which documentation pursuant to paragraph 3 has already been drawn up,
4. mixtures which the operator deems to be highly hazardous to water, regardless of their properties,
5. mixtures that are handled in intermodal transport, as well as
6. mixtures that have been classified by the Federal Environment Agency in accordance with § 11 and whose classification has been published in the Federal Gazette.

(3) The operator shall document the self-classification of a mixture pursuant to paragraph 1 according to the conditions laid down in Appendix 2 point 2 and submit said documentation to the competent authority in the context of approving the facility, as well as at the authority's request within the framework of monitoring the facility. The operator shall keep the documentation and the self-classification of the mixture up to date.

(4) If the documentation contains trade secrets regarding the recipe for a mixture, the operator may refuse to submit the documentation pursuant to paragraph 3. In this instance, he shall inform the competent authority of how large the proportion is each time of all substances in the respective water hazard classes. The competent authority shall document the traceability of the classification.

§ 9

Verification of the self-classification of liquid or gaseous mixtures; changes to the self-classification

(1) The competent authority may verify the documentation as per § 8(3). The competent authority may require the operator to augment or correct missing or implausible statements. It may classify the mixtures differently from the self-classification in accordance with § 8(1). The decision pursuant to sentence 3 must be announced to the operator in writing.

(2) The Federal Environment Agency shall advise the competent authority, at its request, on matters concerning the classification of liquid or gaseous mixtures.

§ 10

Classification of solid mixtures

(1) By way of deviation from § 3(2) sentence 1 point 8, the operator may classify a solid mixture as non-hazardous to water if

1. the mixture can be classified as non-hazardous to water in accordance with Appendix 1 point 2.2,
2. the mixture may be incorporated openly in accordance with other legislation, even at hydrogeologically unfavourable locations and without technical safeguards, or
3. the mixture complies with placement class Z 0 or Z 1.1 of Notification 20 of the Joint Working Group of the Federal States on Waste ([Länderarbeitsgemeinschaft Abfall, German designation: LAGA]) "Requirements pertaining to the material recovery of mineral waste material/waste - Technical regulations", Erich Schmidt-Verlag, Berlin, 2004, which is archived at the German National Library and can be viewed at the library of the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety.

(2) In deviation from § 3(2) sentence 1 point 8, the operator may assign a solid mixture to a water hazard class in accordance with Appendix 1 point 5.

(3) The operator shall document the self-classification of a solid mixture as non-hazardous to water or assign this mixture to a water hazard class in accordance with Appendix 2 point 2 or 3 and submit said documentation to the competent authority in the context of approving the facility, as well as at the authority's request within the framework of monitoring the facility. The operator shall keep the documentation and the self-classification of the mixture up to date. The competent authority may verify the documentation. It may require the operator to augment or correct missing or implausible statements.

(4) The competent authority may contradict the self-classification pursuant to paragraph 1 or paragraph 2 on the basis of the verification as per paragraph 3 sentence 3. In the case of paragraph 2, it may also assign the mixture to a different water hazard class. It may be advised by the Federal Environment Agency in this regard. The decision must be announced to the operator in writing.

§ 11

Classification of mixtures by the Federal Environment Agency

The Federal Environment Agency can classify mixtures as non-hazardous to water or assign them to a water hazard class in accordance with Appendix 1. § 6(4) shall apply accordingly.

Section 4

Commission for the evaluation of substances that are hazardous to water

§ 12

Commission for the evaluation of substances that are hazardous to water

(1) A Commission for the evaluation of substances that are hazardous to water shall be established at the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety as an advisory committee. It shall advise the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety and the Federal Environment Agency on matters concerning classification.

(2) Representatives from the relevant Federal and Federal State authorities, the scientific community and facility operators shall be appointed to the Commission for the evaluation of substances that are hazardous to water. The commission shall not consist of more than 12 members. Membership is on a voluntary basis. The members of the commission are obliged to maintain trade and commercial secrets which come to light within the framework of their work on the commission. Furthermore, the representatives of operators on the commission are obliged not to use any trade and commercial secrets which come to light within the framework of their work on the commission for their own purposes, especially not for commercial purposes.

(3) The Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety shall appoint the members of the Commission for the evaluation of substances that are hazardous to water. The commission shall establish rules of procedure for itself and elect a chairperson from among its members. The rules of procedure require the approval of the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety.

Chapter 3

Technical and organisational requirements for facilities handling substances that are hazardous to water

Section 1

General provisions

§ 13

Restricting the scope of this chapter

(1) This Chapter shall apply to facilities that handle floating liquid substances pursuant to § 3(2) sentence 1 point 7, but only if it cannot be excluded that these substances will reach a body of water situated above ground. Sentence 1 shall also apply to mixtures that only contain floating liquid substances pursuant to § 3(2) sentence 1 point 7 and to mixtures consisting of these floating liquid substances and substances that are non-hazardous to water.

(2) This Chapter shall not apply to

1. facilities for storing household waste and similar waste, in particular waste from offices, local authorities, schools or bars and restaurants that are established in or by the buildings where this waste accumulates;
2. facilities for storing and treating biowaste within the framework of home composting in the private sector;
3. facilities for storing solid commercial waste and solid commercial waste to which substances that are hazardous to water adhere, if
    a) the volume of the storage tank does not exceed 1.25 m^3,

b) the storage tank is leakproof,
c) the area on which the storage tank is installed is designed in such a manner that substances that are hazardous to water cannot reach a body of water in the event of operational malfunctions, and
d) a binder suitable for operational malfunctions is kept on hand;

4. facilities for storing solid mixtures that accumulate on the building site directly as a result of construction work.

(3) Only § 16, § 25(1) and (2) and § 52 from this chapter, as well as Appendix 7, shall apply to liquid manure and slurry installations or silage seepage facilities.

§ 14

Determination and demarcation of facilities

(1) The operator of a facility must document which parts of the installation belong to the facility and where the interfaces to other facilities are located.

(2) All parts of a facility that have a close functional or procedural relationship with one another are deemed to belong to the facility. In particular, this shall be assumed to be the case if substances that are hazardous to water are exchanged between the parts of the facility or if there is a direct safety-related correlation between them.

(3) The areas, including their facilities, that serve to store or regularly deposit substances that are hazardous to water in containers or packages are also part of a facility.

(4) Areas on which means of transport containing substances that are hazardous to water are deposited do not constitute storage facilities. In the case of handling facilities, areas on which containers or packages containing substances that are hazardous to water are temporarily deposited in connection with transport do not constitute storage facilities but are assigned to the handling facility.

(5) An area from which a facility is filled with substances that are hazardous to water, or from which containers or packages containing substances that are hazardous to water are placed in or removed from a facility, constitutes part of the same.

(6) A container in which substances that are hazardous to water are not manufactured, treated or used, but which is in a close functional relationship with a manufacturing, treatment or usage facility, constitutes part of this facility. However, a container is only part of a storage facility if it is assigned to several manufacturing, treatment or usage facilities or if it may contain a greater volume than is necessary for a day’s production or batch.

(7) A pipeline which is an accessory of a facility for handling substances that are hazardous to water in accordance with § 62(1) sentence 2 point 2 of the Water Resources Act, or which links facilities which are closely connected to one another, both spatially and operationally, in accordance with § 62(1) sentence 2 point 3 of the Water Resources Act, shall be assigned to the facility whose accessory it is or by means of which it is linked.

§ 15

Technical rules

(1) The rules corresponding to the generally recognised codes of practice as per § 62(2) of the Water Resources Act include the following rules in particular:

1. Technical rules concerning substances that are hazardous to water issued by the *Deutsche Vereinigung für Wasserwirtschaft, Abwasser und Abfall e. V.* [German Association for Water, Wastewater and Waste]([German designation:] DWA),
2. technical rules concerning water pollution control that are listed in the Specimen List of Technical Building Regulations or in the Bauregelliste [Building Regulations List] of the Deutsches Institut für Bautechnik ([German Structural Engineering Institute, German designation:] DIBt), and
3. DIN standards and EN standards concerning water pollution control and which are not listed in the Building Regulations List of the German Structural Engineering Institute.

(2) Standards and other provisions from other Member States of the European Union or other Signatory States to the Agreement on the European Economic Area are equivalent to technical rules pursuant to paragraph 1 provided the same level of protection is achieved in a permanent manner.

§ 16

Official instructions

(1) If it cannot be guaranteed on account of special circumstances in a specific case, especially due to the hydrogeological quality and the need to protect the installation location, that the requirements under § 62(1) of the Water Resources Act are satisfied, the competent authority may impose requirements that exceed the following:

1. the generally recognised codes of practice,
2. the requirements pursuant to this chapter, or
3. the requirements laid down in a determination of suitability or in another provision superseding the determination of suitability.

The competent authority may also prohibit the establishment of a facility under the preconditions as per sentence 1.

(2) The competent authority may require that the operator takes measures to monitor the bodies of water and soil if doing so is necessary for the early detection of contamination which may emanate from his facility.

(3) On a case-by-case basis, the competent authority may allow exemptions from the requirements of this chapter provided the requirements laid down in § 62(1) of the Water Resources Act are still satisfied.

Section 2

General requirements pertaining to facilities

§ 17

Basic requirements

(1) Facilities must be planned and built, designed and operated in such a manner that

1. substances that are hazardous to water cannot escape,
2. leaks in all parts of the facility which are in contact with substances that are hazardous to water can be detected quickly and reliably,
3. escaping substances that are hazardous to water are detected quickly and reliably, retained and disposed of properly; this also applies to losses arising from spraying and dripping which occur due to operating conditions, and
4. mixtures that may contain escaping substances that are hazardous to water which accumulate during a disruption to the facility's proper operation (operational malfunction) are retained and disposed of properly as waste or eliminated as wastewater.

(2) Facilities must be leakproof, stable and sufficiently resistant to the anticipated mechanical, thermal and chemical influences.

(3) Single-walled underground containers for liquid substances that are hazardous to water are not permitted. Single-walled underground containers for gaseous substances that are hazardous to water are not permitted if the gaseous substances that are hazardous to water escape in liquid form, are heavier than air or dissolve in available moisture once they have leaked into the surrounding soil.

(4) In the event that a facility is decommissioned, the operator shall remove all substances that are hazardous to water contained in the facility, or parts thereof, where this is technically feasible. The operator must secure the facility against improper use.

§ 18

Requirements concerning the retention of substances that are hazardous to water

(1) Facilities must retain in a suitable manner substances that are hazardous to water which have leaked out. To this end, they must be equipped with a retention system within the meaning of § 2(16). Sentence 2 shall not apply if the facility is a double-walled facility within the meaning of § 2(17). Individual parts of a facility may be equipped with different retention systems, each independent of the others. In the case of facilities that are only partially double-walled, single-walled parts of the facility must be provided with a retention system.

(2) Retention systems must be impermeable to liquids and may not have any drains. Construction work executed is deemed to be impermeable to liquid if it does not lose its sealing and loadbearing functions over the duration of the load caused by the substances that are hazardous to water which the facility is handling.

(3) Retention systems must be designed for the following volume:

1. in the case of facilities for storing, manufacturing, treating or utilising substances that are hazardous to water, the retention volume must correspond to the volume of substances that are hazardous to water which could be released in the event of operational malfunctions until such time as suitable safety measures can take effect;
2. in the case of facilities for drawing off liquid substances that are hazardous to water, the retention volume must correspond to the volume which could be released in the event of the greatest possible volume flow until such time as suitable safety measures can take effect;

3. in the case of facilities for handling substances that are hazardous to water, the retention volume must correspond to the volume that could be released from the largest container, the largest package or the largest handling unit in which substances that are hazardous to water are to be found and for which the facility is designed.

It is possible to dispense with a retention volume in the case of aboveground facilities for handling substances that are hazardous to water in water hazard class 1 with a volume of up to 1 000 litres if said facilities are located on an area which

1. meets operational requirements and leak detection is guaranteed by infrastructure measures, or
2. is designed to be impermeable to liquid.

(4) In the case of facilities for storing, manufacturing, treating or utilising substances that are hazardous to water in hazard level D pursuant to § 40(1), in deviation from paragraph 3 sentence 1 point 1, the retention system must be designed in such a way that the volume of liquid substances that are hazardous to water which could be released from the largest cordoned off operating unit in the event of operational malfunctions can be completely retained without taking corrective action.

(5) Single-walled containers, pipelines and other parts of facilities must be spaced apart from walls, floors and other components, as well as from one another, so that it is possible to detect leaks and also monitor the status of the retention systems in particular at all times.

(6) In the case of double-walled containers situated above ground which have a system for detecting liquids in water hazard class 1, retention of the leak detection liquid is not necessary if the volume of this liquid does not exceed 1 m^3.

(7) Substances that are hazardous to water which may react with one another in the event of a leak so as to impair the retention function as per paragraph 1 must be collected separately.

§ 19

Requirements in terms of drainage

(1) If the entry of precipitation cannot be avoided, drains shall be permitted in deviation from § 18(2), as long as they are only opened if it has been determined previously that the precipitation does not contain any substances that are hazardous to water. Precipitation contaminated by substances that are hazardous to water must be eliminated properly as wastewater or disposed of as waste.

(2) In the case of facilities for drawing off or handling where the entry of precipitation is inevitable, in deviation from paragraph 1 and § 18(2), precipitation that may be contaminated with substances that are hazardous to water can be introduced into a sewer or body of water if

1. the substances that are hazardous to water which are released during an operational malfunction are retained, and
2. the discharge of the contaminated precipitation complies with requirements under water legislation and the local discharge conditions.

In the case of transformers and switchgear and controlgear in the electrical industry where the entry of precipitation is inevitable, by way of deviation from paragraph 1 and § 18(2), said precipitation may be introduced into a sewer or body of water provided the substances that are hazardous to water which are released in the event of an operational malfunction are retained.

(3) Paragraphs 1 and 2 and § 18(3) shall not apply in the case of petrol stations for own consumption if technical or organisational measures are taken to ensure that an equivalent level of protection is achieved.

(4) The precipitation from areas on which the cooling units of cooling devices using ethylene glycol or propylene glycol are installed outdoors must be introduced into a sewer for untreated wastewater or mixed water. Requirements under water legislation for introducing this precipitation and the conditions locally relating to introduction shall not be affected.

(5) Precipitation contaminated by fermentation substrates or residues in biogas facilities must be collected in its entirety and disposed of as wastewater or recycled as waste in accordance with regulations. This shall not apply to biogas facilities with fermentation substrates of agricultural origin for producing biogas if the contaminated precipitation is used in accordance with the Code of Good Practice for fertilisation. The surrounding wall as per § 38(3) must be drained properly.

(6) The competent authority shall decide on the method for retaining substances that are hazardous to water and the disposal of precipitation in the case of retention systems where

1. the entry of precipitation is inevitable, and
2. inspecting the drain before opening it would only be possible with a disproportionate amount of time and

effort.

(7) In the case of retention systems with no roof cover, a retention volume for precipitation must also be established in addition to the retention volume for substances that are hazardous to water pursuant to § 18(3).

§ 20

Containment in the event of fire

Facilities must be planned, built and operated in such a manner that substances that are hazardous to water, extinguishing, irrigation and cooling water, as well as the resulting combustion products with water-polluting characteristics which escape in the event of fire, are retained in accordance with the generally recognised codes of practice. Sentence 1 shall not apply to facilities where fires cannot be expected to occur or to fuel oil consumer installations.

§ 21

Special requirements for retention in the case of pipelines

(1) Aboveground pipelines for transporting liquid substances that are hazardous to water must be equipped with retention systems. The retention volume must correspond to the volume of substances that are hazardous to water which could be released in the event of operational malfunctions until such time as suitable safety measures can take effect. Paragraphs 1 and 2 shall not apply if technical or organisational measures based on a risk assessment are taken to ensure that an equivalent level of protection is achieved. In the case of fuel oil consumer installations in hazard levels A and B, the risk assessment shall be regarded as having been carried out if the fuel oil consumer installation complies with the applicable generally recognised codes of practice within the meaning of § 15. In the case of aboveground pipelines for transporting liquid substances that are hazardous to water in water hazard class 1,

retention systems may be dispensed with without a risk assessment if the locations of the pipelines do not require any special protection on account of their hydrogeological properties.

(2) In the case of underground pipelines for transporting liquid or gaseous substances that are hazardous to water, detachable connections and fittings must be arranged in control units that are impermeable to liquid. These must be inspected on a regular basis. These pipelines must be

1. double-walled; leaks in pipeline walls must be indicated automatically by means of a system for detecting liquids,
2. executed as a suction line in which the fluid column stops abruptly in the event of leaks, flows back into the storage tank, and a siphoning effect is ruled out, or
3. provided with a protective pipe or laid in a duct; escaping substances that are hazardous to water must be visible in a control unit that is impermeable to liquid; pipelines of this kind may not carry any liquids with a flashpoint up to a temperature of 55 degrees Celsius.

If none of the requirements as per sentence 2 can be satisfied due to operational safety reasons in particular, technical or organisational measures must be taken to ensure that an equivalent level of safety is achieved.

(3) Paragraph 1 and paragraph 2 sentence 2 shall not apply to pipelines of sprinkler systems and of heating and cooling systems which are operated in buildings using a mixture of water and glycol.

(4) In the case of cooling devices in which ammonia is used as a refrigerant, underground single-walled pipelines may be used in the part of the facility that provides the cooling capability.

(5) Pipelines for transporting solid substances that are hazardous to water do not need to satisfy any requirements concerning retention over and above operating requirements.

§ 22

Requirements where wastewater facilities are used as a collection device

(1) Substances that are hazardous to water which inevitably escape from a facility while it is operating as intended, and which, for operational reasons, cannot be detected quickly and reliably, retained or disposed of properly, may be introduced into the in-house sewerage system if

1. only negligible quantities are concerned,
2. the in-house wastewater treatment facility is suitable for this purpose, and
3. the introduction of these substances complies with the requirements under water legislation and conditions locally relating to introduction.

(2) If substances that are hazardous to water or other substances or mixtures contaminated with these substances that are hazardous to water which escape in the event of leaks or operational malfunctions cannot be retained in the facility itself on operational grounds, they may be retained in a suitable collection device of the in-house sewerage system if, from there, they can be disposed of safely as waste or as wastewater.

(3) In the instances under paragraphs 1 and 2, the technical and organisational measures which must be taken to detect and examine the escape of substances that are hazardous to

water must be regulated in the operating instructions as per § 45 on the basis of an assessment of the facility, possible operational malfunctions, the accumulation of substances that are hazardous to water, the wastewater facilities and the sensitivity of the bodies of water. The operating instructions must also stipulate whether the substances that are hazardous to water are to be caught separately from the wastewater or if they should be introduced into the wastewater facilities.

(4) The parts of wastewater facilities which, in accordance with paragraph 2 or § 19(2) sentence 1, may also be used to retain substances that are hazardous to water, or as per paragraph 1, must be designed such that they are impermeable to liquid and incorporated into the inspections as per § 47 by the experts if the corresponding facility is subject to inspection.

§ 23

Requirements pertaining to the capacity of fermentation residue stores in biogas facilities

If fermentation residues arising from the operation of a biogas facility are to be used as fertiliser, the volume of the fermentation residue stores must be sufficient such that the fermentation residues which accumulate during operation of the biogas facility can be collected over a period of at least 9 months.

§ 24

Requirements in terms of filling and draining

(1) Any party filling or draining a facility must monitor this procedure and be assured that the safety devices required to this end are in proper working order before beginning work. The permissible load limits of the facility and the safety devices must be observed during filling or draining.

(2) Containers in facilities for handling liquid substances that are hazardous to water may only be filled through fixed pipe connections while utilising an overfill safety device. Other technical or organisational safeguards which result in an equivalent level of safety are also permitted in the case of facilities for manufacturing, treating or utilising substances that are hazardous to water, as well as in the case of aboveground containers which have a capacity of up to 1.25 m^3 each time and are not connected to one another. In the case of facilities for drawing off containers with a volume in excess of 1.25 m^3 that are not used in a stationary manner, the overfill safety device can be replaced by a volume- or weight-dependent control system.

(3) Containers in facilities for storing fuels pursuant to § 2(11) sentence 1 point 2, diesel, petrol fuels or fuels consisting of substances produced from biomass (regardless of its proportions) may only be filled from road tanker vehicles, demountable tanks and mobile tanks if an automatically closing filling safety device is used. By way of deviation from sentence 1, fuel oil consumer installations with a volume of up to 1.25 m^3 may also be filled using automatically closing nozzles.

§ 25

Obligations in the event of operational malfunctions; repairs

(1) The operator must take damage control measures immediately if it cannot be ruled out that substances that are hazardous to water will escape from parts of a facility in the event of an operational malfunction. He shall shut down the facility immediately if he cannot prevent hazard or harm to a body of water by other means. If necessary, the facility must be drained.

(2) Any party operating, filling, draining, dismantling, decommissioning, maintaining, repairing, cleaning, monitoring or inspecting a facility must notify the competent authority or a police station forthwith of the escape of a not insignificant quantity of substances that are hazardous to water. This obligation also applies if it is suspected that a not insignificant quantity of substances that are hazardous to water have already escaped and it cannot be ruled out that this may endanger a body of water or wastewater facilities. The party which caused the substances that are hazardous to water to escape, or the party taking measures to detect or eliminate the substances that are hazardous to water which escaped from the facilities, is also obliged to provide notification. If third parties, in particular operators of wastewater facilities or water utilities, may be affected, then the operator must inform them immediately.

(3) A repair programme must be drawn up based on a condition assessment report for repairing a facility or part thereof.

Section 3

Special requirements pertaining to retention in the case of certain facilities

§ 26

Precedence of the provisions under Section 3

If this section makes provision for special requirements pertaining to the retention of substances that are hazardous to water in the case of certain facilities, or if retention is not required under certain preconditions in accordance with this section, then these provisions shall take precedence over the respective requirements as per § 18(1) to (3).

§ 27

Special requirements pertaining to facilities for storing, drawing off, manufacturing, treating or using solid substances that are hazardous to water

(1) Facilities for storing, drawing off, manufacturing, treating or using solid substances that are hazardous to water shall not require retention if

1. the substances in question
    a) are located in tightly sealed containers or packages which are protected against damage and also against the effects of the weather and the substances are stable, or
    b) are located in enclosed spaces or in areas protected against the effects of the weather which prevent drift, and
2. the floor area meets operational requirements.

(2) Facilities for storing, drawing off, manufacturing, treating or using solid substances that are hazardous to water where the ingress of precipitation or other water into these substances cannot be prevented under all operating conditions shall not require retention if

1. the solubility in water of the substances that are hazardous to water is less than 10 grams per litre,
2. the solid substances that are hazardous to water are handled in such a way as to prevent detrimental changes to the characteristics of bodies of water caused by drifting, washing away, erosion or other means of escape of these substances, or precipitation contaminated by these substances, and
3. the areas on which the solid substances that are hazardous to water are handled are stabilised in such a way that precipitation accumulating there does not escape onto the bottom side of the fortification and is eliminated as wastewater or disposed of as waste in accordance with regulations.

§ 28

Special requirements pertaining to facilities for storing or drawing off solid substances to which liquid substances that are hazardous to water adhere

By way of deviation from § 18(3), the volume of liquid substances that are hazardous to water which can accumulate is the decisive factor in the case of facilities for storing or drawing off solid substances to which liquid substances that are hazardous to water adhere when calculating the volume of the retention systems. If this is not known, the volume shall be set at 5 % of the volume of the facility.

§ 29

Special requirements pertaining to areas for handling substances that are hazardous to water

(1) The areas of facilities for handling liquid substances that are hazardous to water must be impermeable to liquid. The precipitation that accumulates there must be disposed of properly as waste or eliminated as wastewater as per regulations in accordance with § 19(2) sentence 1. § 27(1) shall apply accordingly to areas of facilities for handling solid substances that are hazardous to water.

(2) No further requirements beyond operational ones are imposed on traffic areas which assist in the manoeuvring of means of transport carrying transport containers and packages which contain substances that are hazardous to water.

§ 30
Special requirements pertaining to facilities for handling intermodal transport

(1) Areas of facilities for handling intermodal transport are those areas on which substances that are hazardous to water are transferred to loading units or road vehicles which are marked under dangerous goods law. Areas as per sentence 1 must be paved with concrete or asphalt in such a way that precipitation accumulating there does not escape onto the bottom side and is eliminated as wastewater or disposed of as waste in accordance with regulations as per § 19(2) sentence 1.

(2) Facilities for handling intermodal transport must have an emergency area or device which is impermeable to liquid on which loading units or road vehicles, from which substances that are hazardous to water escape, can be parked and where substances that are hazardous to water are retained. The precipitation which accumulates on the emergency areas must be

eliminated as wastewater or disposed of as waste in accordance with regulations as per § 19(2) sentence 1.

(3) § 29(2) shall apply accordingly.

§ 31

Special requirements pertaining to facilities for loading and unloading ships and to facilities for refuelling water craft

(1) Facilities for loading and unloading ships containing substances that are hazardous to water and facilities for refuelling water craft do not require any shipboard retention.

(2) When loading and unloading unpacked liquid substances that are hazardous to water, and when refuelling water craft, however, the following special requirements must be satisfied in particular:

1. the land and ship-side safety systems must be coordinated with one another;
2. safe breaks which close automatically on both sides must be used when loading and unloading in pressure mode;
3. in suction mode, it must be ensured that the connected containers cannot run empty as a result of the siphoning effect if the suction line is damaged;
4. if there are pipelines or hoses above bodies of water, then technical or organisational measures must be taken to afford the best possible protection for bodies of water from detrimental changes to their characteristics.

(3) Bulk goods must be loaded and unloaded in such a way as to prevent solid substances that are hazardous to water from entering bodies of water situated above ground by means of suitable measures.

§ 32

Special requirements pertaining to drum and container storage facilities

(1) In the case of drum and container storage facilities, the substances that are hazardous to water must be stored in tightly sealed containers or packages which

1. are approved under dangerous goods law or
2. which are resistant to liquids and protected against damage and also against the effects of the weather when located outdoors.

(2) Drum and container storage facilities must be equipped with a retention system with a retention volume which, in deviation from § 18(3) sentence 1 point 1, is determined as follows:

Decisive volume (V_{ges}) of the facility in cubic metres	Retention volume
≤ 100	10 % of V_{ges}, but not less than the capacity of the largest container
> 100 ≤ 1 000	3 % of V_{ges}, but not less than 10 m3
> 1 000	2% of V_{ges}, but not less than 30 m3

(3) In the case of drum and container storage facilities for mobile containers and packages with an individual volume of up to 0.02 m^3, or in the case of containers and packages from which the remnants have been emptied, an area that is impermeable to liquid without a defined retention volume shall, by way of deviation from paragraph 2, be sufficient if substances that are hazardous to water which have escaped can be collected quickly and the damage can be rectified safely using standard equipment.

§ 33

Special requirements pertaining to areas for drawing off in fuel oil consumer installations

Areas for drawing off in fuel oil consumer installations do not require a system of retention if the fuel oil consumer installation is filled using the full hose system from road tanker vehicles authorised for this purpose and an approved, automatically closing filling safety device and overfill prevention sensor are used. Sentence 1 shall also apply to fuel oil consumer installations with a volume of up to 1.25 m^3 which are filled using an automatically closing nozzle.

§ 34

Special requirements pertaining to areas for drawing off in certain facilities for using liquid substances that are hazardous to water

Retention is not required for areas for drawing off that are part of facilities for using liquid substances that are hazardous to water where it can be assumed, based on their intended use, that they are only filled or emptied once in principle. In particular, hydraulic systems and oil-filled transformers are deemed to be facilities within the meaning of sentence 1.

§ 35

Special requirements pertaining to facilities for using substances that are hazardous to water in the energy supply sector and in hydraulic engineering facilities

(1) Aboveground facilities for using substances that are hazardous to water in water hazard class 1 or water hazard class 2 as refrigerants, lubricants or insulating material, or as hydraulic liquid in the energy supply sector and in hydraulic engineering facilities with a volume in excess of 10 m^3, do not require a system of retention if they satisfy the requirements in accordance with paragraphs 2 and 3.

(2) Facilities and parts thereof (including pipelines) which cannot be equipped with a retention system for operational or design reasons must be monitored by automatic fault indicators in conjunction with a continuously manned operating control centre or control room, or by means of regular inspection rounds. Emergency plans and action plans which describe effective measures and precautions designed to prevent harm to bodies of water, and which have been coordinated with the authorities involved in the measures, must be prepared in relation to them. The emergency plans and action plans must be presented to the competent authority on request.

(3) If cooling units in direct contact with water are used, then they must be designed as double-pipe coolers, dual-circuit coolers or cooling systems that are technically equivalent to them. The cooling systems must be equipped with automatic fault indicators.

§ 36

Special requirements pertaining to geothermal probes and collectors, solar collectors and cooling devices

(1) Paragraphs 2 to 4 shall apply to geothermal probes and collectors, solar collectors and cooling devices in which substances that are hazardous to water are used in the industrial sector or in the field of public institutions.

(2) The heat transfer circuits of geothermal probes and collectors may be designed with only one wall when underground if

1. they consist of a factory-welded probe base and continuously welded probe pipes,
2. they are safeguarded by automatic monitoring and safety devices so that the circulating pump will shut off immediately and an alarm is triggered in the event of a leak in the heat transfer circuit, and
3. only the following substances or mixtures are used as a heat transfer media:
    a) substances that are non-hazardous to water or
    b) mixtures of water hazard class 1 whose main constituents are ethylene glycol or propylene glycol.

§ 18(1) to (3) and § 21(2) sentence 2 shall not apply if the requirements as per sentence 1 are satisfied.

(3) Outdoor solar collectors and cooling devices containing liquid substances that are hazardous to water do not require a system of retention if

1. they are safeguarded by automatic monitoring and safety devices so that the circulating pump will shut off immediately and an alarm is triggered in the event of a leak,
2. they only use the following substances or mixtures as heat transfer media:
    a) substances that are non-hazardous to water or
    b) mixtures of water hazard class 1 whose main constituents are ethylene glycol or propylene glycol, and
3. the cooling units are installed on a paved area.

(4) Cooling devices with gaseous substances that are hazardous to water of water hazard class 1 do not require a system of retention.

§ 37

Special requirements pertaining to underground oil cable and earth cable systems

In the case of underground earth cable system, devices for retaining cable-impregnating compound are not required. Devices for retaining insulating oils are not required in the case of underground oil cable systems if the operator monitors the systems, electrically and hydraulically, using automatic fault indicators, if faults are indicated at a continuously manned operating control centre, if the operating values are recorded on a continuous basis, and if deviations from target values are checked.

§ 38

Special requirements pertaining to biogas facilities with fermentation substrates of agricultural origin

(1) By way of deviation from § 18(1) to (3), the retention of substances that are hazardous to water in biogas facilities in which fermentation substrates as per § 2(8) are used exclusively must be arranged in accordance with paragraphs 2 to 5.

(2) Single-walled facilities with liquid substances that are generally hazardous to water must be equipped with a leak detection system. Facilities for storing solid fermentation substrates or solid fermentation residues must have a storage area that is impermeable to liquid. These facilities do not require a leak detection system.

(3) Facilities in which leaks may occur above ground level must be equipped with a surrounding wall that is capable of holding back the volume that could be released in the event of operational malfunctions until such time as suitable safety measures can take effect, but at least the volume of the largest container. This shall not apply to storage facilities for solid fermentation substrates or solid fermentation residues. Individual facilities pursuant to § 2(14) may be equipped with a collective surrounding wall.

(4) Underground tanks, pipelines and collection facilities in which substances that are hazardous to water accumulate on a regular basis may be designed with a single wall provided they are equipped with a leak detection system and comply with the technical rules.

(5) Underground tanks in which the lowest point of the base plate’s bottom edge is below the highest anticipated groundwater level, as well as underground tanks in protected areas, must be executed as double-walled tanks with a leak detection system.

(6) Ground basins are not permissible for storing fermentation residues resulting from the operation of biogas facilities.

§ 39

Special requirements pertaining to aboveground facilities for handling gaseous substances that are hazardous to water

(1) Aboveground facilities for handling gaseous substances that are hazardous to water do not require a system of retention.

(2) By way of deviation from paragraph 1, measures for detecting damage and those relating to retention and the proper and safe recovery or disposal of the substances must be taken on the basis of a risk assessment if

1. the facility handles gaseous substances that are hazardous to water which can escape in liquid form in the event of an operational malfunction due to their chemical or physical properties, or
2. substances which have been contaminated by escaping substances that are hazardous to water can accumulate during damage control measures.

(3) No retention measures are necessary for facilities with a definitive mass of up to 1 tonne of gaseous substances that are hazardous to water, even if the preconditions pursuant to

paragraph 2 are present, if the containers meet the requirements under dangerous goods law, and the damage can be rectified using standard equipment.

Section 4

Requirements for facilities depending on their hazard levels

§ 40

Hazard levels of facilities

(1) Operators must assign a hazard level to facilities according to the table below. In the case of liquid substances, the decisive volume for the facility in question should be taken as the basis, while the decisive mass for the facility in question should be taken as the basis in the case of gaseous and solid substances.

Determination of the hazard levels	**Water hazard class (WHC)**		
Volumes in cubic metres (m^3) or mass in tonnes (t)	**1**	**2**	**3**
≤ 0.22 m^3 or 0.2 t	Level A	Level A	Level A
> 0.22 m^3 or 0.2 t ≤ 1	Level A	Level A	Level B
> 1 ≤ 10	Level A	Level B	Level C
> 10 ≤ 100	Level A	Level C	Level D
> 100 ≤ 1 000	Level B	Level D	Level D
> 1 000	Level C	Level D	Level D

(2) Unless otherwise provided for in paragraphs 3 to 8,

1. the decisive volume is the rated volume of the facility, including all of its parts, or, following safety-related retrofitting, the maximum volume that can be used during operation and which is indicated on the facility in a manner that cannot be removed, and
2. the decisive mass is the mass of substances that are hazardous to water which the facility, including all of its parts, is able to handle.

Shut-off devices used during operation within a facility are not taken into consideration.

(3) In the case of storage facilities, the decisive volume arises from the capacity of all the containers that are part of the facility which can be used during operation. The decisive volume of a drum and container storage facility arises from the sum of the capacity of all the containers and packages for which the storage facility is designed.

(4) In the case of facilities for drawing off, the decisive volume is either the capacity which ensues during the largest volumetric flow over a period of 10 minutes or the capacity which ensues based on the facility's average daily throughput. The larger value shall be used.

(5) In the case of facilities for transferring substances that are hazardous to water in containers or packages from one means of transport to another, as well as in the case of facilities for loading and unloading general cargo or loose bulk goods from ships, the decisive volume or mass corresponds to the largest unit being transferred for which the facility is designed.

(6) In the case of facilities for manufacturing, treating or utilising substances that are hazardous to water, the decisive volume is determined by the largest volume established in consideration of the process technology which is present in a facility while being operated in accordance with regulations.

(7) In the case of pipeline facilities, the decisive volume is either the capacity which ensues during the largest volumetric flow over a period of 10 minutes in addition to the volume of the pipeline facility, or the capacity which ensues based on the facility's average daily throughput. The larger value shall be used.

(8) In the case of facilities for storing, drawing off or transferring solid substances to which liquid substances that are hazardous to water adhere, the volume of liquid substances that are hazardous to water which can accumulate is decisive.

(9) The decisive volume of a biogas facility arises from the sum of the volumes of the facilities specified in § 2(14).

(10) In the case of facilities in which substances that are hazardous to water of different water hazard classes are handled simultaneously, the substances with the highest water hazard class are decisive for determining the hazard level if the proportion of these substances amounts to more than 3 per cent of the total capacity of the facility. If this percentage is smaller, the next lower water hazard class shall be decisive.

(11) No hazard level shall be assigned to facilities handling substances that are generally hazardous to water pursuant to § 3(2).

§ 41

Obligation to disclose

(1) Any party seeking to erect or significantly alter a facility subject to inspection in accordance with § 47(2) or (3), or who wishes to take measures at said facility resulting in a change in the hazard level in accordance with § 40(1), must notify the competent authority in writing at least 6 weeks in advance.

(2) The notification pursuant to paragraph 1 must contain information on the operator, the location and demarcation of the facility, on the substances that are hazardous to water which the facility handles, on proofs of usability from the building inspectorate, as well as on the technical and organisational measures that are important for the safety of the facility.

(3) The establishment of the following is not subject to the obligation to disclose in accordance with paragraph 1:

1. Facilities for storing, drawing off or transferring substances that are hazardous to water in respect of which a determination of suitability as per § 63(1) of the Water Resources Act is being applied for and
2. other facilities that are the subject of an approval procedure in accordance with other legislation, if fulfilment of the requirements under this ordinance is ensured in the approval procedure.

Significant alterations to the facility that require approval are also not subject to the obligation to disclose in the instances under sentence 1 point 2.

(4) If the operator of a facility subject to inspection in accordance with § 47(2) or (3) changes, then the new operator must notify the competent authority of this forthwith in writing. Sentence 1 shall not apply to operators of fuel oil consumer installations.

§ 42

Exemptions from the requirement for a determination of suitability

(1) Over and above the cases provided for in § 63(2) and (3) of the Water Resources Act, the determination of suitability as per § 63(1) of the Water Resources Act is not required for

1. facilities for storing, drawing off or transferring gaseous substances that are hazardous to water, as well as facilities in hazard level A for storing, drawing off or transferring liquid or solid substances that are hazardous to water,
2. facilities for storing, drawing off or transferring floating liquid substances in accordance with § 3(2) sentence 1 point 7,
3. facilities for storing, drawing off or transferring substances that are generally hazardous to water that are not subject to inspection pursuant to § 47(2) or (3),
4. fuel oil consumer installations and
5. facilities with a volume of up to 1 m^3 that are double-walled or have a retention volume which can retain the entire volume of substances that are hazardous to water which are present in the facility.

(2) A determination of suitability is not required for facilities in hazard levels B and C, nor is it required for facilities subject to inspection which contain substances that are generally hazardous to water in accordance with § 47(2) or (3), if

1. one of the following proofs is available for all parts of a facility, including its technical safeguards:
   a) a CE mark indicating the permissible classes and performance levels pursuant to § 63(3) sentence 1 point 1 of the Water Resources Act,
   b) approvals or proofs in accordance with § 63(3) sentence 1 point 2, and sentence 2, of the Water Resources Act, or
   c) in the case of containers and packages, approvals in accordance with provisions under dangerous goods law

   And
2. it is corroborated by means of an expert's report that the facility satisfies, by and large, the requirements pertaining to the protection of bodies of water.

The facility may be erected and operated as planned if the competent authority has neither prohibited its establishment or operation, nor stipulated requirements pertaining to the establishment or operation of the facility, within a period of 6 weeks following presentation of the proofs specified in sentence 1 point 1 and the expert report as per sentence 1 point 2. Requirements under other areas of law shall not be affected.

(3) In the case of hazard level D facilities, the competent authority may dispense with a determination of suitability if the requirements pursuant to paragraph 2 sentence 1 are satisfied.

§ 43

Application documents for the determination of suitability

The documents necessary to demonstrate proof of suitability must be enclosed with the application for issuing a determination of suitability. At the request of the competent authority, an expert report must be enclosed with the application. Test certificates and reports from test centres or experts in other Member States of the European Union and other Signatory States to the Agreement on the European Economic Area are also regarded as proofs if the requirements for testing the facility are equivalent to those under this ordinance. § 53(2) sentences 2 and 3 shall apply accordingly to the test certificates and reports.

§ 44

Documentation relating to the facility

(1) The operator shall keep documentation relating to the facility, which includes the key information pertaining to it. This includes, in particular, information on the layout and demarcation of the facility, on the substances used, the design, the materials used in the individual parts of the facility, on safety devices and safeguards, fire water retention and stability. In the event of a change of operator, the documentation must be handed over to the new operator.

(2) If the facility is subject to inspection in accordance with § 47(2) or (3), in addition to the documentation under paragraph 1, the operator must also provide the documents that are necessary to inspect the facility and conduct work that must be performed by specialist companies as per § 46. This includes, in particular, documentation relating to the demarcation of the facility as per § 14(1), a determination of suitability that has been issued, proofs of usability from the building inspectorate and the most recent inspection report pursuant to § 48(3) sentence 1.

(3) The operator shall present the documents as per paragraph 2 to the competent authority, to experts prior to tests, and to specialist companies as per § 63 prior to activities which require a specialist company.

(4) Paragraph 1 shall not apply to facilities that are part of an EMAS [Eco-Management and Audit Scheme] location within the meaning of § 3 point 12 of the Water Resources Act provided the information comparable to that in the facility documentation is contained in

1. a registration-based environmental statement in accordance with Article 2 point 18 of Regulation (EC) No. 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), repealing Regulation (EC) No. 761/2001 and Commission Decisions 2001/681/EC and 2006/193/EC (OJ L 342 of 22 December 2009, p. 1), which resides with the competent authority and has been validated, or
2. in an environmental audit report as per Annex III letter C to Regulation (EC) No. 1221/2009.

§ 45

Operating instructions; instruction sheet

(1) The operator shall keep operating instructions to hand which contain monitoring, maintenance and emergency plans and stipulate urgent measures to prevent detrimental changes to the characteristics of bodies of water. The plan must be coordinated with the

bodies which are involved within the framework of the emergency plan and the urgent measures. The operator shall ensure compliance with the operating instructions and also that they are kept up to date.

(2) The facility's operating personnel must then be instructed on how to conduct themselves according to the operating instructions before commencing work and at appropriate intervals on a regular basis thereafter, but at least once a year. The operator must then document that the instruction has been carried out.

(3) The operating instructions must be accessible to the facility's operating personnel at all times.

(4) Paragraphs 1 to 3 shall not apply to

1. facilities in hazard level A,
2. petrol stations for own consumption,
3. fuel oil consumer installations,
4. facilities for handling floating liquid substances with a volume of up to 100 m^3 and
5. facilities containing up to 1 000 tonnes of solid mixtures.

Instead, in the case of facilities as per sentence 1 point 3, the instruction sheet on operating regulations and the code of conduct when operating fuel oil consumer installations as per Appendix 3 and, in the case of facilities as per sentence 1 points 1, 2, 4 and 5, the instruction sheet on operating regulations and the code of conduct when handling substances that are hazardous to water as per Appendix 4, must be permanently displayed in an easily visible location in the vicinity of the facility. The affixing of the instruction sheet as per Appendix 4 can be dispensed with if the information stipulated therein is documented by other means in the vicinity of the facility such that it is easily visible. In the case of facilities for utilising substances that are hazardous to water in hazard level A which are operated outdoors outside of municipalities, it shall suffice to display a telephone number in an easily visible location that can be used to alert people to operational malfunctions.

§ 46

Obligation to employ a specialist company; exemptions

(1) The following facilities, including all the parts thereof, may only be erected, cleaned internally, repaired and decommissioned by specialist companies in accordance with § 63:

1. underground facilities;
2. aboveground facilities for handling liquid substances that are hazardous to water in hazard levels C and D,
3. aboveground facilities for handling liquid substances that are hazardous to water in hazard level B within water protection areas,
4. fuel oil consumer installations in hazard levels B, C and D,
5. biogas facilities,
6. facilities for handling intermodal transport and
7. facilities for handling floating liquid substances pursuant to § 3(2) sentence 1 point 7.

(2) By way of deviation from paragraph 1, work on facilities or parts thereof, which is not of direct importance for the safety of the facility, does not have to be performed by specialist companies.

§ 47

Operator’s monitoring and inspection duties

(1) The operator must inspect the imperviousness of the facility and the functionality of the safety devices at regular intervals. On a case-by-case basis, the competent authority may order the operator to conclude a monitoring agreement with a specialist company in accordance with § 63 if the operator does not possess the requisite expertise and does not have staff at his disposal with the necessary specialist knowledge either.

(2) Operators must arrange for facilities located outside of protected areas and defined or provisionally secured flood plains to be inspected to ensure that they are in proper working order at inspection times and intervals established in accordance with Appendix 5.

(3) Operators must arrange for facilities located inside protected areas and in defined or provisionally secured flood plains to be inspected to ensure that they are in proper working order at inspection times and intervals established in accordance with Appendix 6.

(4) The competent authority may order a one-off inspection or recurrent inspections, irrespective of the inspection times and intervals arising on the basis of paragraphs 2 and 3, especially if there are concerns as to a detrimental change in the properties of bodies of water.

(5) Operators must arrange for facilities in which a significant or hazardous defect has been detected in accordance with § 48(2) to be reinspected once the defect has been rectified in accordance with § 49(1).

(6) The inspection as per paragraph 2 or 3 shall lapse if the facility does not assist in the research, development or testing of new input materials, fuels, products or processes and is not operated for longer than 1 year.

(7) More extensive regulations, especially those in a determination of suitability pursuant to § 63(1) of the Water Resources Act, shall not be affected.

§ 48

Inspection by experts

(1) Inspections as per § 47(2) to (5) may only be conducted by experts.

(2) The expert must classify the facility based on the outcome of the inspections in accordance with § 47 into one of the following classes:

1. free from defects,
2. with minor defects,
3. with significant defects or
4. with hazardous defects.

(3) The expert must submit an inspection report to the competent authority on the outcome of each inspection he has conducted in accordance with § 47 within 4 weeks of the date of the inspection. The expert shall inform the competent authority of any hazardous defects forthwith. The inspection report as per sentence 1 must contain information on the following:

1. the operator,

2. the location,
3. the identification of the facility,
4. the facility classification,
5. the substances that are hazardous to water which the facility handles,
6. official approvals,
7. the expert and the expert organisation responsible for appointing him,
8. the nature and scope of the inspection,
9. whether the inspection of the facility as a whole has been concluded or which parts of the facility have not yet been inspected,
10. the nature and extent of any defects identified,
11. the date and outcome of the inspection,
12. the measures required and a proposal for an appropriate deadline for implementing them or on the need to draw up a repair plan,
13. the date of the next inspection and
14. the successful rectification of any defects identified in follow-up inspections pursuant to § 47(5).

The information according to sentence 3 points 1, 2, 3, 9, 11 and 13 must be displayed on the first page of the inspection report, highlighted to make it more visible.

(4) If, once the inspection is complete, the expert classifies a fuel oil consumer installation as being ‘free from defects’ or ‘with minor defects’ in accordance with paragraph 2, he shall affix a sticker to the facility in an easily visible location which indicates the date the inspection was carried out and the date of the next one.

(5) While inspecting a fuel oil consumer installation, the expert shall hand over to the operator the instruction sheet as per Appendix 3 if such an instruction sheet has not already been displayed on the facility.

§ 49

Rectification of defects

(1) If the inspections as per § 47 which have been carried out by an expert reveal minor defects, the operator must rectify these defects within 6 months and, if required in accordance with § 46, must have said defects eliminated by a specialist company pursuant to § 63. Significant and hazardous defects must be eliminated forthwith, however.

(2) If the expert detects a hazardous defect within the meaning of § 48(2) point 4 during his inspection in accordance with § 47, the operator must shut down the facility straight away and, if this is deemed necessary on the basis of an assessment by the expert, drain it. The facility may only be put back into operation if the competent authority is in receipt of confirmation from the expert that the defects have been remedied successfully.

Section 5

Requirements for facilities in protected areas and flood plains

§ 50

Requirements pertaining to facilities in protected areas

(1) Facilities may not be erected and operated within the coverage area and the narrower zone of protected areas.

(2) The following facilities may not be established in the broader zone of protected areas, while the following existing facilities may not be expanded therein:

1. facilities of hazard level D,
2. biogas facilities with a decisive volume in excess of 3 000 m^3 in total,
3. underground facilities of hazard level C, and
4. facilities with geothermal probes.

Facilities in the broader zone of protected areas may not be altered in such a way that would turn them into facilities as per sentence 1. Sentence 1 point 2 shall not apply if the volume for fulfilling the requirements in accordance with § 23 needs to be exceeded based on the capacity of the fermentation residue store or the biogas facilities exclusively deal with animal excrement from their own livestock farming established in the broader protected zone.

(3) Paragraph 2 notwithstanding, only storage facilities and facilities designed to manufacture, treat and use substances that are hazardous to water may be erected and operated in the broader zone of protected areas if these facilities

1. are equipped with a retention system which, by way of deviation from § 18(3), is able to absorb the entire volume of the substances that are hazardous to water which are present in the facility, or
2. have a double-wall design and are equipped with a leak detection system.

In deviation from sentence 1, only the requirements stipulated in Section 3 shall apply to the facilities specified therein. This shall not apply to the facilities mentioned in §§ 32 and 39 or to the facilities mentioned in § 35 for using substances that are hazardous to water in the energy supply sector.

(4) The competent authority may issue an exemption from the requirements pursuant to paragraphs 1 and 2 if

1. the public good requires doing so or a ban would result in unreasonable hardships, and
2. the protective purpose of the protected area is not impaired.

(5) Paragraphs 2 and 3 shall not apply if Federal State ordinances on defining protected areas lay down more extensive regulations.

§ 51

Requirements pertaining to facilities in defined and provisionally secured flood plains

(1) Facilities may only be erected and operated in defined and provisionally secured flood plains within the meaning of § 76 of the Water Resources Act or in accordance with Federal State legislation if substances that are hazardous to water are not washed away or released by flood waters and are unable to find their way into a body of water or wastewater treatment facility by other means.

(2) § 50(4) shall apply accordingly to exemptions from the requirements as per paragraph 1.

(3) § 78 of the Water Resources Act and more extensive provisions under Federal State ordinances relating to flood plains shall not be affected.

§ 52

Distance to wells for drinking water, springs and bodies of water above ground

The distance from liquid manure and slurry installations or silage seepage and biogas facilities in which fermentation substrates as per § 2(8) are used exclusively to private or commercially used springs or wells which assist in the production of drinking water must be at least 50 metres, while the distance to aboveground bodies of water must be at least 20 metres. This shall not apply if the operator furnishes proof that corresponding protection of the production of drinking water or bodies of water is guaranteed by other means.

Chapter 4

Expert organisations and experts; quality control and monitoring bodies and specialist assessors; specialist companies

§ 53

Approval of expert organisations

(1) Expert organisations require approval by the competent authority. Approved expert organisations are entitled

1. to appoint experts who
    a) conduct inspections of facilities in accordance with § 47(2) to (5) and Appendix 7 point 7.4 and
    b) compile reports in accordance with § 42(2) sentence 1 point 2, also in conjunction with paragraph 3, or pursuant to § 43(2), and
2. to certify and monitor specialist companies in accordance with § 63(1) if the approval also covers the latter.

(2) Approvals from another Member State of the European Union or another Signatory State to the Agreement on the European Economic Area shall be deemed to be the equivalent of approvals pursuant to paragraph 1 if they are equivalent to them. Either the original or a copy of these approvals must be submitted to the competent authority before inspection or monitoring work commences. The copy may require attestation. The competent authority may also demand that equivalent approvals as per sentence 1 are submitted in the form of a notarised translation in German.

(3) An organisation may be accredited as an expert organisation if it

1. appoints a natural person as an authorised representative and demonstrates said person’s power of representation to the competent authority,
2. furnishes proof that a technical management board and substitute representation which meet the requirements applicable to experts as per § 54 have been appointed,
3. has appointed a sufficient number of experts who satisfy the requirements specified in § 54 and who are committed to follow orders and technical instructions from the technical management board,
4. has set out principles that must be followed during facility inspections,
5. demonstrates that it has an internal quality assurance system,

6. furnishes proof that it has liability insurance for soil and water pollution in relation to the work conducted by its experts, with a liability limit of at least EUR 2.5 million per claim, and
7. declares that it exempts the Federal States in which the experts carry out inspections from any liability associated with their experts' activities.

The quality assurance system as per sentence 1 point 5 must ensure that suitable organisational structures are present which guarantee proper facility inspections pursuant to § 47. In particular, the quality assurance system must contain stipulations for checking the inspection reports and inspection devices, holding one-on-one conversations with experts, and examining the inspection work carried out by experts on reference facilities. If approval also covers the certification and monitoring of specialist companies in accordance with § 63(1), § 58(3) sentence 1 points 3 and 4 shall apply accordingly to the expert organisations in addition to the preconditions mentioned in sentence 1. In this instance, sentence 2 notwithstanding, the quality assurance system as per sentence 1 point 5 must also ensure that suitable organisational structures are present on which basis the specialist assessors are monitored and which guarantee that the specialist companies are verified in accordance with regulations.

(4) When reviewing the application for approval, proof of individual preconditions from another Member State of the European Union or another Signatory State to the Agreement on the European Economic Area shall be deemed to be the equivalent of proof provided in Germany if it emerges that the organisation meets the relevant requirements as per paragraph 3 or satisfies the requirements of the issuing state that are largely comparable in terms of their objective. Paragraph 2 sentences 2 and 3 shall apply accordingly.

(5) The approval may be subject to revocation or a time limitation or be issued in connection with conditions and requirements or subject to certain requirements. The approval shall be valid across the entire Federal territory.

(6) Decisions regarding an application for approval must be made within a period of 4 months. § 42a(2) sentences 2 to 4 of the Act on administrative procedures shall apply. The approval procedure may be handled by a point of single contact.

(7) Groups that are consolidated into independent organisational units of a company and which are not bound by orders regarding their inspection work may also be approved as an expert organisation. Paragraph 3 shall not be affected.

§ 54

Appointment of experts

(1) An expert organisation may only appoint people as experts who
1. possess the necessary reliability to work as an expert,
2. are independent with respect to the inspection work. In particular, there may be no connection between the tasks as per § 53(1) sentence 2 point 1 and other services which are, or have been, furnished in connection with the planning, manufacture, sale, operation or maintenance of the facilities or parts thereof to be inspected,
3. are physically capable of conducting the inspections in accordance with regulations,
4. are able to ensure that they will conduct inspections properly on account of their expertise and experience gained from their work in practice,

5. have the required knowledge of the relevant regulations under water, construction, operational safety, emission protection and waste legislation, as well as knowledge of the technical rules, and
6. have not been appointed by any other expert organisation operating on Federal territory.

The appointment can be restricted to specific fields of activity. Compliance with the requirements under sentence 1 must be documented by the expert organisation in an appointment record prior to the appointment.

(2) The reliability required in accordance with paragraph 1 sentence 1 point 1 is generally deemed not to be present if the expert has been convicted of imprisonment, juvenile detention or a fine for violating regulations

1. under criminal law concerning offences that are dangerous to public safety, offences against the environment, or falsification of documents,
2. under legislation for protecting nature and the landscape as well as under chemical, genetic engineering or radiation protection legislation,
3. under foodstuff, pharmaceutical, plant protection or infection protection law,
4. under commercial, product safety or industrial safety legislation, or
5. under legislation on narcotics, weapons or explosives.

(3) Furthermore, the required reliability is generally deemed not to be present if the expert in question has been penalised with a fine in excess of EUR 500 within a five-year period preceding the appointment for violating regulations

1. under emission protection, waste and water legislation, legislation for protecting nature and the landscape, as well as under soil conservation, chemical, genetic engineering or nuclear and radiation protection legislation,
2. under foodstuff, pharmaceutical, plant protection or infection protection law,
3. under commercial, product safety or industrial safety legislation, or
4. under legislation on narcotics, weapons or explosives.

Individuals who are no longer capable of holding public office in accordance with § 45 of the German Criminal Code are not deemed to be reliable either.

(4) Generally speaking, the required reliability is also deemed not to be present if the expert in question

1. has repeatedly violated the provisions mentioned in paragraphs 2 and 3 or has acted with gross negligence,
2. has altered inspection results or failed to reproduce them in full, either intentionally or in a grossly negligent manner,
3. has repeatedly violated requirements laid down in the technical guidelines which are relevant to the accuracy of the inspection results,
4. has violated obligations arising from this ordinance, either intentionally or in a grossly negligent manner, or
5. has repeatedly compiled inspection reports with considerable or serious shortcomings, or has repeatedly missed deadlines for submitting them, either intentionally or in a grossly negligent manner.

(5) The expertise required in accordance with paragraph 1 sentence 1 point 4 is deemed to be present if the expert in question has successfully completed a course of study in engineering or natural sciences in a field that is relevant to the work conducted or has professional training which is recognised as being equivalent. The experience according to paragraph 1 sentence 1 point 4 requires at least a five-year professional career in the field of planning, building,

operating or inspecting facilities for handling substances that are hazardous to water. Prior to making the appointment, the expert organisation shall satisfy itself by means of a theoretical and practical examination that the expert to be appointed satisfies the requirements under paragraph 1 sentence 1 point 4. The outcome of this examination must be documented.

(6) If, in the case of an expert organisation which is entitled to certify and monitor specialist companies, experts are used who are appointed to certify and monitor just specialist companies, then the requirements in terms of expertise and experience as per paragraph 5 may only be deviated from in relation to these experts with the consent of the competent authority.

(7) The expert must be provided with an appointment letter at the time of his appointment.

§ 55

Revocation and expiry of approval; expiry of experts' appointments

(1) The expert organisation's approval can be revoked, § 49(2) sentence 1 points 2 to 5 of the Act on administrative procedures notwithstanding, if the expert organisation

1. no longer fulfils one of the requirements pursuant to § 53(3) or (4),
2. fails to rescind the appointment of an expert who no longer fulfils the preconditions pursuant to § 54, or who has repeatedly conducted facility inspections as per § 47 incorrectly, despite a request from the competent authority,
3. fails to fulfil obligations in accordance with § 56 points 1 to 4 or 6 to 9, § 62(1) sentence 1 point 1 or paragraph 4, or § 63(2), or fails to fulfil them properly, or
4. fails to revoke the certification of a specialist company which no longer fulfils the preconditions as per § 63(2), or which has repeatedly carried out work that must be performed by a specialist company incorrectly, despite a request from the competent authority.

(2) Approval shall expire if the expert organisation disbands or decides to initiate insolvency proceedings. If insolvency proceedings are initiated, the competent authority can, on request, give approval to the expert organisation again for a limited period.

(3) The appointment of an expert shall expire if

1. it is rescinded,
2. the expert resigns from the expert organisation which appointed him, or
3. the approval of the expert organisation which appointed the expert is revoked in accordance with paragraph 1 or expires in accordance with paragraph 2 sentence 1.

In the instances under sentence 1, the expert must hand back the appointment letter in accordance with § 54(7).

§ 56

Obligations incumbent upon expert organisations

The expert organisation is obliged

1. to rescind an expert's appointment if
   a) the appointment was obtained by means of intentional deception, menace or bribery,
   b) the expert has repeatedly conducted facility inspections incorrectly, repeatedly violated obligations under § 57, either in a grossly negligent manner

or intentionally, or no longer meets the requirements pertaining to experts listed in § 54, or

c) the competent authority orders the appointment to be rescinded,

2. to notify the competent authority within 4 weeks of the appointment of experts, their fields of activity, changes to their fields of activity and the expiry of an expert's appointment,

3. to check the proper performance of inspections conducted by experts by means of spot checks,

4. to gather and assess the findings obtained during inspections and to share these findings within the organisation at least 4 times a year, including for the purpose of providing the experts with further training,

5. to take part in an annual exchange of information among the technical management boards of all expert organisations,

6. to communicate to the competent authority the following information relating to the preceding calendar year by 31 March of each year so that the aforementioned authority may carry out its supervisory tasks:

a) changes to its organisational structure and principles of inspection,

b) an overview of the inspections conducted by each expert, as well as

c) the findings obtained during inspections and during the observation of deviations in accordance with § 69(3),

7. to inform the competent authority forthwith of a change in the authorised representative,

8. to ensure that the technical management board and the appointed experts take part in further training events on a regular basis, at least every 2 years,

9. not to disclose or exploit trade and commercial secrets which it becomes aware of in the scope of its work without authorisation, and

10. to inform the competent authority forthwith of the dissolution of the expert organisation.

§ 57

Obligations incumbent upon appointed experts

(1) Every expert is obligated to keep an inspection log that indicates at least the type, scope and results of all the inspections conducted. The expert must submit the inspection log to the competent authority on request.

(2) Experts may not disclose or exploit trade and commercial secrets which it becomes aware of in the scope of its work without authorisation.

§ 58

Approval of quality control and monitoring bodies

(1) Quality control and monitoring bodies require approval by the competent authority. Accredited quality control and monitoring bodies are entitled to appoint specialist assessors to certify and monitor specialist companies pursuant to § 63(1).

(2) Approvals from another Member State of the European Union or another Signatory State to the Agreement on the European Economic Area shall be deemed to be the equivalent of approvals pursuant to paragraph 1 if they are equivalent to them. Either the original or a copy

of these approvals must be submitted to the competent authority before the work as per paragraph 1 sentence 2 commences. The copy may require attestation. The competent authority may also demand that equivalent approvals as per sentence 1 are submitted in the form of a notarised translation in German.

(3) An organisation shall be approved as a quality control and monitoring body if it

1. appoints a natural person as an authorised representative and demonstrates said person's power of representation to the competent authority,
2. furnishes proof that a technical management board and substitute representation which meet the requirements applicable to specialist assessors as per § 59(1) have been appointed,
3. has appointed a sufficient number of specialist assessors who satisfy the requirements referred to in § 59(1) and who are committed to following orders and technical instructions from the technical management board,
4. has established principles that must be followed during the certification and monitoring of specialist companies, and
5. demonstrates that it has an internal quality assurance system.

The quality assurance system pursuant to sentence 1 point 5 must ensure that suitable organisational structures are present on which basis the specialist assessors are monitored and which guarantee that the specialist companies are reviewed properly.

(4) § 53(4) shall apply accordingly to proof of individual preconditions for approval from another Member State of the European Union or another Signatory State to the Agreement on the European Economic Area.

(5) The approval can be restricted to specific fields of expertise. It may be subject to revocation or a time limitation or be issued in connection with conditions, requirements or subject to certain requirements. The approval shall be valid across the entire Federal territory.

(6) Decisions on an application for approval must be made within a period of 4 months. § 42a(2) sentences 2 to 4 of the Act on administrative procedures shall apply. The approval procedure may be handled by a point of single contact.

§ 59

Appointment of specialist assessors

(1) A quality control and monitoring body may only appoint individuals as specialist assessors for certifying and monitoring specialist companies when these individuals

1. possess the reliability necessary to work as a specialist assessor,
2. are independent with respect to their work. In particular, there must be no connection between certification or monitoring and other services offered by the specialist company,
3. are capable of reviewing specialist companies in respect of whether they meet the requirements under § 63(2) on account of their expertise and experience gained from their work in practice,
4. have the required knowledge of the relevant regulations under water, construction, operational safety, emission protection and waste legislation, as well as knowledge of the technical rules, and
5. have not been appointed by any other quality control and monitoring body operating within the Federal territory of Germany.

§ 54(2) to (5) shall apply accordingly to the reliability as per sentence 1 point 1. The expertise required in accordance with sentence 1 point 3 is deemed to be present if the specialist assessor to be appointed has successfully completed a course of study in engineering or natural sciences in a field that is relevant to the work conducted or has professional training which is recognised as being equivalent. The experience according to sentence 1 point 3 requires at least a five-year professional career in the field of planning, building, repairing, operating or inspecting facilities for handling substances that are hazardous to water. Prior to making the appointment, the quality control and monitoring body shall satisfy itself by means of an examination that the specialist assessor to be appointed satisfies the requirements under sentence 1 point 3. The outcome of this examination must be documented. Compliance with the requirements under sentence 1 must be documented by the quality control and monitoring body in an appointment record prior to the appointment.

(2) Requirements in terms of expertise and experience as per paragraph 1 sentences 3 and 4 may only be deviated from with the consent of the competent authority. This shall not apply to the technical management board.

(3) The specialist assessor must be provided with an appointment letter at the time of his appointment.

(4) A quality control and monitoring body can reach an agreement with another quality control and monitoring body or with an expert organisation that individuals who have been appointed by the other organisation to certify and monitor specialist companies will work for them if it is ensured that these individuals

1. are bound by the principles of the quality control and monitoring body for which they work, which must be observed in accordance with § 58(3) sentence 1 point 4 when certifying and monitoring specialist companies, and
2. are subject to the internal quality assurance system as per § 58(3) sentence 1 point 5 of the quality control and monitoring body for which they work.

§ 60

Revocation and expiry of approval; expiry of the appointments of specialist assessors

(1) The quality control and monitoring body's approval can be revoked, § 49(2) sentence 1 points 2 to 5 of the Act on administrative procedures notwithstanding, if the quality control and monitoring body

1. no longer fulfils one of the requirements pursuant to § 58(3) or (4),
2. fails to revoke the certification of a specialist company which no longer fulfils the preconditions as per § 63(2), or which has repeatedly carried out work incorrectly that must be performed by a specialist company, despite a request from the competent authority, or
3. fails to fulfil obligations in accordance with § 61(1) points 1 to 6 or 8, § 62(1) sentence 1 point 1 or paragraph 4, or § 63(2), or fails to fulfil them properly.

(2) Approval shall expire if the quality control and monitoring body disbands or decides to initiate insolvency proceedings. If insolvency proceedings are initiated, the competent authority may, on request, give approval to the quality control and monitoring body again for a limited period

(3) The appointment of a specialist assessor shall expire if

1. it is rescinded,
2. the specialist assessor resigns from the quality control and monitoring body which appointed him, or
3. the approval of the quality control and monitoring body which appointed the specialist assessor is revoked in accordance with paragraph 1 or expires in accordance with paragraph 2 sentence 1.

In the instances under sentence 1, the specialist assessor must hand back the appointment letter in accordance with § 59(3).

§ 61

Obligations incumbent upon quality control and monitoring bodies and specialist assessors

(1) The quality control and monitoring body is obliged

1. to rescind the appointment of a specialist assessor if
   a) the appointment was obtained by means of intentional deception, menace or bribery,
   b) the specialist assessor has repeatedly violated obligations under paragraph 2, either in a grossly negligent manner or intentionally, or no longer meets the requirements pertaining to specialist assessors listed in § 59(1), or
   c) the competent authority orders the appointment to be rescinded,
2. to notify the competent authority within 4 weeks of the appointment of specialist assessors, their fields of activity, changes to their fields of activity and the expiry of a specialist assessor's appointment,
3. to communicate to the competent authority information on changes to the organisational structure relating to the preceding calendar year by 31 March of each year so that the aforementioned authority may carry out its supervisory tasks,
4. to inform the competent authority forthwith of a change in the authorised representative,
5. to ensure that the technical management board, its substitute representation and the specialist assessors take part in further training events on a regular basis, at least every 2 years,
6. to share the findings obtained during the certification and monitoring of specialist companies within the organisation at least 4 times a year. These findings are also used for the purpose of training staff within the specialist company,
7. to take part in an annual exchange of information among the technical management boards of the quality control and monitoring bodies,
8. not to disclose or exploit trade and commercial secrets which it becomes aware of in the scope of its work without authorisation, and
9. to inform the competent authority forthwith of the dissolution of the quality control and monitoring body.

(2) Specialist assessors may not disclose or exploit without authorisation trade and commercial secrets which they become aware of in the scope of their work.

§ 62

Common obligations of the expert organisations and the quality control and monitoring bodies

(1) Expert organisations which are entitled to certify and monitor specialist companies, as well as quality control and monitoring bodies, are obliged

1. to inspect these specialist companies to ensure compliance with the requirements as per § 63(2), and to verify that the specialist company is conducting its work properly, on a regular basis, but at least every 2 years, and whenever there is reason to do so, and to document the type, extent and outcome, as well as the location and date, of the respective inspection,
2. to gather and assess the findings obtained during the inspections of the specialist companies,
3. to communicate to the competent authority the findings obtained from the inspections of the specialist companies relating to the preceding calendar year by 31 March of each year.

The inspections as per sentence 1 point 1 include, in particular, inspections of the results and the quality of practical work conducted by the specialist company, scrutiny of participation in training or further training events as per paragraph 2, as well as inspections of the devices and equipment components in accordance with § 63(2) sentence 1 point 1.

(2) Expert organisations and quality control and monitoring bodies must offer training sessions for their field of activity which provide the person responsible within the company and the staff involved within the specialist company with the requisite knowledge, particularly in the fields referred to in § 63(2) sentence 2.

(3) Expert organisations and quality control and monitoring bodies must publish in a suitable manner on the internet the names of those specialist companies which work on behalf of third parties as soon as they are certified. The information must be kept up to date. The specialist fields and activities in which the specialist company is being monitored by the expert organisation or the quality control and monitoring body must be specified in the announcement as per sentence 1.

(4) Expert organisations and quality control and monitoring bodies are obliged to revoke a specialist company’s certification forthwith if the latter

1. has repeatedly carried out work incorrectly that must be performed by a specialist company,
2. no longer satisfies the requirements pertaining to specialist companies as cited in § 63(2) and § 64(1), or
3. fails to fulfil the obligation as per § 64(2).

§ 63

Specialist companies; certification of specialist companies

(1) Companies which carry out the work mentioned in § 46(1) on the facilities and parts thereof specified therein require certification as a specialist company by an expert organisation or a quality control and monitoring body. The certification can be restricted to specific fields of activity. It shall be limited to a period of 2 years.

(2) An expert organisation or quality control and monitoring body may only certify a company as a specialist company if this company

1. possesses the devices and equipment components which guarantee compliance with the requirements as per § 62(1) and (2) of the Water Resources Act and of this ordinance,

2. has appointed a person responsible within the company who
   a) has successfully completed an examination for a master craftsperson's diploma in a relevant trade, successfully completed a course of study in engineering in a field that is relevant to the work conducted, or has suitable training which is recognised as being equivalent,
   b) has at least 2 years of practical experience in the specialist company's field of activity, and
   c) has sufficient knowledge of the fields mentioned in sentence 2, proof of which has been furnished in an examination,
3. only uses personnel who possess the skills required for the work envisaged or who have taken part in manufacturers' training sessions on the products to be used, and
4. creates working conditions which ensure that the work is carried out as per regulations.

The knowledge pursuant to sentence 1 point 2c must comprise the following:
1. the layout and mode of operation of the facilities and their hazard potential,
2. the characteristics of the substances handled by the facilities, in particular in terms of the danger they pose to water,
3. the relevant regulations under water, construction, operational safety, emission protection and waste legislation, and
4. requirements pertaining to the processing of certain construction products and parts of facilities.

(3) The expert organisation or quality control and monitoring body shall issue a certification document once the certification process has been completed. The certificate must contain the following information:
1. the name and address of the specialist company,
2. the name and address of the expert organisation or quality control and monitoring body which certified the company,
3. a description of the specialist company's field of activity, and
4. the period of validity of the certification.

(4) Any company which satisfies the requirements pursuant to paragraph 2 and is entitled to carry out work that is reserved for specialist companies in the Federal Republic of Germany in accordance with § 46 in another Member State of the European Union or in another Signatory State to the Agreement on the European Economic Area shall also be deemed to be a specialist company provided it is subject to an equivalent level of monitoring in another country.

§ 64

Obligations incumbent upon specialist companies

(1) The specialist company must ensure that the person responsible within the company takes part in training sessions as per § 62(2) or in other further training events deemed to be equivalent at least every 2 years, and that the personnel used do the same on a regular basis.

(2) Specialist companies are obliged to inform the expert organisation or the quality control and monitoring body monitoring them forthwith of changes to their organisational structure.

(3) A company whose certification as a specialist company has been withdrawn must return the certification document as per § 63(3) to the expert organisation or quality control and monitoring body forthwith. This certificate may no longer be used.

§ 65

Proof of status as a specialist company

Specialist companies must furnish proof of their status as a specialist company to the operator of a facility without being requested to do so if said operator commissions the specialist company to carry out work that must be performed by a specialist company. They must furnish proof of their status as a specialist company to the competent authority on request. The proof as per sentences 1 and 2 is deemed to have been furnished if the specialist company presents its certification document as per § 63(3) or a notarised copy thereof. Sentences 1 and 2 shall apply in the instances under § 63(4) with the proviso that proof of entitlement and equivalent inspection must be furnished. § 53(2) sentences 2 and 3 shall apply accordingly.

Chapter 5

Regulatory offences, concluding provisions

§ 66

Regulatory offences

A regulatory offence within the meaning of § 103(1) point 3a of the Water Resources Act is committed by any party which wilfully or negligently

1. fails to communicate, or does not do so correctly, in full, in the prescribed manner or in good time, contrary to § 7(2),
2. fails to establish or operate a facility correctly, contrary to § 13(3), in conjunction with Appendix 7 point 2.2,
3. fails to monitor a procedure or fails to ensure that a safety device specified therein is in proper working order, or fails to do so in good time, contrary to § 13(3), in conjunction with Appendix 7 point 6.1 letter a,
4. fails to comply with a load limit for a facility or safety device, contrary to § 13(3), in conjunction with Appendix 7 point 6.1 letter b,
5. fails to make a complaint, or fails to do so correctly or in good time, contrary to § 13(3), in conjunction with Appendix 7 point 7.1 sentence 1,
6. fails to take action, or fails to do so correctly or in good time, contrary to § 13(3), in conjunction with Appendix 7 point 7.2 sentence 2 or point 7.3,
7. fails to undertake a notification, or fails to do so correctly or in good time, contrary to § 13(3), in conjunction with Appendix 7 point 7.2 sentence 3,
8. fails to make arrangements for a facility to be inspected, or fails to do so in good time, contrary to § 13(3), in conjunction with Appendix 7 point 7.4,
9. fails to present an inspection report, or fails to do so in good time, contrary to § 13(3), in conjunction with Appendix 7 point 7.5 sentence 1,
10. fails to rectify a defect, or does not do so correctly, in the prescribed manner or in good time, contrary to § 13(3), in conjunction with Appendix 7 point 7.7 sentence 1 or 2,
11. fails to take a facility out of operation, or fails to do so in good time, or fails to

drain a facility, or fails to do so in good time, contrary to § 13(3), in conjunction with Appendix 7 point 7.7 sentence 4,
12. fails to bring a facility back into operation, contrary to § 13(3), in conjunction with Appendix 7 point 7.7 sentence 5,
13. contravenes an enforceable order as per § 16(1),
14. fails to establish or operate a facility correctly, contrary to § 17(1),
15. fails to remove a substance mentioned therein, or fails to do so in good time, contrary to § 17(4) sentence 1,
16. fails to secure a facility, or fails to do so in good time, contrary to § 17(4) sentence 2,
17. fails to monitor a procedure or fails to ensure that a safety device specified therein is in proper working order, or fails to do so in good time, contrary to § 24(1) sentence 1,
18. fails to comply with a load limit for a facility or safety device, contrary to § 24(1) sentence 2,
19. fills a container, contrary to § 24(2) sentence 1 or paragraph 3 sentence 1,
20. fails to take a facility out of operation, or fails to do so in good time, contrary to § 25(1) sentence 2,
21. fails to make a complaint, or does not do so correctly, in full, in the prescribed manner or in good time, contrary to § 25(2) sentence 1, also in conjunction with sentence 2 or 3, or contrary to § 40(1),
22. fails to keep operating instructions available, contrary to § 45(1) sentence 1;
23. fails to instruct operating personnel, or fails to do so in good time, contrary to § 45(2) sentence 1,
24. fails to affix an instruction sheet, or does not do so in the prescribed manner or for the stipulated duration, contrary to § 45(4)sentence 2,
25. establishes, cleans, repairs or decommissions a facility contrary to § 46(1),
26. fails to make arrangements for a facility to be inspected, or fails to do so in good time, contrary to § 47(2), (3) or (5),
27. contravenes an enforceable order as per § 47(4),
28. conducts an inspection contrary to § 48(1),
29. fails to present an inspection report, or fails to do so in good time, contrary to § 48(3) sentence 1,
30. fails to rectify a defect, or does not do so correctly, in the prescribed manner or in good time, contrary to § 49(1) sentence 1 or 2,
31. fails to take a facility out of operation, or fails to do so in good time, or fails to drain a facility, or fails to do so in good time, contrary to § 49(2) sentence 1,
32. brings a facility back into operation contrary to § 49(2) sentence 2,
33. establishes, operates or extends a facility mentioned therein, contrary to § 50(1), paragraph 2 sentence 1 or § 51(1), or
34. appoints a person as an expert contrary to § 54(1) sentence 1 point 2.

§ 67

Existing classifications of substances and mixtures

Substances, groups of substances and mixtures that have already been classified on ... [insert: the date this ordinance enters into force in accordance with § 74 sentence 2] by means of, or on the basis of, the administrative provision concerning substances which are hazardous to water of 17 May 1999 (Federal Gazette No. 98a of 29 May 1999), which has been amended by the General administrative provision amending the administrative provision concerning

substances which are hazardous to water of 27 July 2005 (Federal Gazette No. 142a of 30 July 2005), shall be regarded as classified in accordance with this classification within the meaning of Chapter 2; these classifications are published in the Federal Gazette each time by the Federal Environment Agency. The Federal Environment Agency shall also provide a search function on the internet which can be used to ascertain existing classifications of substances that are hazardous to water, groups of substances and mixtures in accordance with sentence 1.

§ 68

Changing the classification of substances that are hazardous to water

If changing the classification of a substance that is hazardous to water results in an increase in a facility's hazard level, the further requirements pertaining to the facility resulting from this shall only be satisfied if the competent authority so orders. Sentence 1 shall also apply to facilities that were already established on ... [insert: the date this ordinance enters into force in accordance with § 74 sentence 2] (existing facilities).

§ 69
Existing facilities that are subject to recurrent inspections

(1) The following shall apply to existing facilities that are subject to recurrent inspections in accordance with § 47(2) to (4) as of ... [insert: the date this ordinance enters into force in accordance with § 74 sentence 2]:

1. § 24(1) and §§ 25, 41 and 42 to 49 and
2. the remaining provisions of this ordinance if they contain specifications which comply with the requirements which had to be observed in accordance with the respective provisions under Federal State law on ... [insert: the date of the day prior to the entry into force of this ordinance in accordance with § 74 sentence 2]; requirements in official approvals are deemed to be requirements in accordance with provisions under Federal State law.

Information in accordance with § 44(1) sentences 1 and 2 which cannot be acquired, or can only be acquired with a disproportionate level of expense, does not have to be included in the documentation relating to the facility.

(2) In the case of existing facilities that are subject to recurrent inspections pursuant to § 47(2) to (4), the expert must verify the extent to which the facility does not meet the requirements as per paragraph 1 sentence 1 point 2.

(3) In the case of existing facilities that are subject to recurrent inspections in accordance with § 47(2) to (4), the expert must determine during the initial inspection the extent to which this ordinance contains requirements in relation to the facility over and above the requirements which had to be observed in accordance with the respective provisions under Federal State law on ... [insert: the date of the day prior to the entry into force of this ordinance in accordance with § 74 sentence 2], with the exception of the provisions mentioned in paragraph 1 sentence 1 point 1. The determination as per sentence 1 must be presented to the competent authority together with the inspection report as per § 48(3).

(4) If deviations are detected in accordance with paragraph 3 sentence 1, the competent authority may order technical or organisational adaptation measures to be carried out

1. by means of which these deviations are rectified,

2. which are envisaged for these deviations in technical rules relating to existing facilities, or
3. by means of which equivalence to the requirements described in paragraph 3 sentence 1 is achieved.

The requirements laid down in § 62(1) of the Water Resources Act must be observed in the instances under sentence 1 points 2 and 3.

(5) The decommissioning or removal of a facility, or adaptation measures which equate to rebuilding the facility, or which alter the purpose of the facility, cannot be demanded on the basis of deviations found in accordance with paragraph 3 sentence 1.

(6) If significant or hazardous defects are detected on a container or on the retention system during an inspection of existing facilities in accordance with § 47(2) to (4), then the requirements laid down in this ordinance must be complied with when rectifying these defects.

(7) If key structural components or crucial safety devices of an existing facility are to be modified, then the requirements under this ordinance that go beyond the requirements which already had to be observed from the time of the modification in accordance with the respective provisions under Federal State law on ... [insert: the date of the day prior to the entry into force of this ordinance in accordance with § 74 sentence 2], with the exception of the provisions mentioned in paragraph 1 sentence 1 point 1, shall apply to these components or safety devices.

(8) Existing facilities of a simple or conventional design within the meaning of § 19h(1) sentence 2 point 1 of the Water Resources Act, in the version applicable as of 28 February 2010, and in accordance with the more detailed provisions of the regulations under Federal State law effective as of ... [insert: the date of the day prior to the entry into force of this ordinance in accordance with § 74 sentence 2], do not require any determination of suitability as per § 63(1) sentence 1 of the Water Resources Act.

(9) By way of deviation from § 29(1) sentence 1 and § 30(1) sentence 2, track areas of existing handling facilities do not have to be upgraded so that they are impermeable to liquid.

(10) Existing biogas facilities with fermentation substrates exclusively agricultural in origin must be provided with a surrounding wall as per § 38(3) by ... [insert: the day and month of the entry into force of this ordinance as per § 74 sentence 2 and the year of the fifth year following its entry into force]. With the competent authority's consent, this may be dispensed with if a surrounding wall cannot be implemented for reasons of insufficient space in particular. Further adaptation measures in accordance with paragraph 4 need only be taken after this date on the instructions of the competent authority.

(11) In the case of existing biogas facilities, the minimum storage capacity of 9 months shall be upgraded in terms of the capacity of fermentation residues in accordance with § 23 by [insert: the day and month of the entry into force of this ordinance as per § 74 sentence 2 and the year of the fifth year following its entry into force] at the latest.

§ 70

Existing facilities that are not subject to recurrent inspections

(1) The provisions under Federal State law applicable as of ... [insert: the date of the day prior to the entry into force of this ordinance in accordance with § 74 sentence 2] shall continue to apply to existing facilities that are not subject to recurrent inspections in accordance with § 47(2) to (4) if, and as long as, the competent authority has not taken a decision pursuant to sentence 2. For facilities within the meaning of sentence 1, the competent authority may stipulate which requirements under this ordinance must be satisfied by which time. Sentences 1 and 2 notwithstanding, § 24(1) and §§ 25, 41 and 44 to 49 shall already apply as of ... [insert: the date this ordinance enters into force in accordance with § 74 sentence 2]:

(2) Otherwise, § 69(5), (7) and (8) shall apply, *mutatis mutandis*.

§ 71

Test intervals for existing facilities

(1) The interval for the initial recurrent inspection of facilities as per column 3 of Appendix 5 or Appendix 6 begins with the conclusion of the most recent inspection in accordance with provisions under Federal State law in the case of facilities which had already been established on ... [insert: the date this ordinance enters into force in accordance with § 74 sentence 2]. The activities of a specialist company which take the place of the inspection under Federal State law are also regarded as an inspection within the meaning of sentence 1.

(2) Existing facilities that are subject to recurrent inspections in accordance with column 3 of Appendix 5 or Appendix 6, but which were not subject to recurrent inspections based on the provisions under Federal State law prior to ... [insert: the date this ordinance enters into force in accordance with § 74 sentence 2], must be inspected for the first time within the following periods of time:

1. Facilities which were commissioned prior to 1 January 1971 must be inspected by ... [insert: the day and month of the entry into force of this ordinance as per § 74 sentence 2 and the year of the second year following its entry into force],
2. facilities which were commissioned in the period from 1 January 1971 to 31 December 1975 must be inspected by ... [insert: the day and month of the entry into force of this ordinance as per § 74 sentence 2 and the year of the fourth year following its entry into force],
3. facilities which were commissioned in the period from 1 January 1976 to 31 December 1982 must be inspected by ... [insert: the day and month of the entry into force of this ordinance as per § 74 sentence 2 and the year of the sixth year following its entry into force],
4. facilities which were commissioned in the period from 1 January 1983 to 31 December 1993 must be inspected by ... [insert: the day and month of the entry into force of this ordinance as per § 74 sentence 2 and the year of the eighth year following its entry into force],
5. facilities which were commissioned after 31 December 1993 must be inspected by ... [insert: the day and month of the entry into force of this ordinance as per § 74 sentence 2 and the year of the 10th year following its entry into force],

§ 72

Installation of light fluid separators

Light fluid separators for fuels with ethanol admixtures may only be installed as of 1 January 2016 if proof has been furnished that they are resistant to these fuels and that their functionality is only diminished to a negligible extent.

§ 73

Transitional provisions for specialist companies, expert organisations and appointed individuals

(1) A facility that was entitled to display quality marks from a monitoring or quality control body recognised under building legislation as of ... [insert: the date of the day prior to the entry into force of this ordinance in accordance with § 74 sentence 1], or which had concluded a monitoring agreement with a technical supervisory organisation prior to ... [insert: the date of the day of the entry into force of this ordinance in accordance with § 74 sentence 1], shall be regarded as a specialist company within the meaning of § 63(1) until ... [insert: the date of the day 2 years after the entry into force of this ordinance in accordance with § 74 sentence 1], as long as the requirements as per § 63(2) are satisfied and the monitoring or quality control body recognised under building legislation, or the technical supervisory organisation, monitors compliance with said requirements. In the instances under § 65 sentence 1, proof of status as a specialist company is furnished if the specialist company is presented with confirmation from the monitoring or quality control body indicating that it is entitled to display the quality mark or a confirmation from a technical supervisory organisation indicating that it is monitoring the specialist company within the framework of a monitoring agreement.

(2) Approvals from expert organisations in accordance with the provisions under Federal State law which have been issued prior to ... [insert: the date of the day of the entry into force of this ordinance in accordance with § 74 sentence 2] shall continue to be regarded as approvals as per § 53(1) sentence 1. If § 53(3) contains requirements which go beyond the requirements of the 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 approval as per sentence 1 was issued for a limited period and this time limitation ends prior to ... [insert: the first day of the 10th month following the month of promulgation], it shall continue to be regarded as an approval within the meaning of § 53(1) sentence 1 until ... [insert: the first day of the 10th month following the month of promulgation].

(3) The requirements as per § 54(1) sentence 1 point 4, in conjunction with paragraph 5, and as per § 63(2) sentence 1 point 2 letters a to c shall not apply to individuals who have been appointed by an expert organisation or a specialist company prior to ... [insert: the date of the day of the entry into force of this ordinance in accordance with § 74 sentence 2].

§ 74

Entry into force; abrogation

§§ 58 to 61 shall enter into force on the day following promulgation. The remainder of this ordinance shall enter into force on ... [insert: the date of the first day of the fourth calendar month following the promulgation of this ordinance]. The Ordinance on facilities for handling substances that are hazardous to water of 31 March 2010 (Federal Law Gazette I p. 377) shall cease to be valid on the date specified in sentence 2.

Approved by the *Bundesrat*.

Berlin, dated …

Appendix 1
(re § 4(1), § 8(1) and § 10(2))

Classification of substances and mixtures as non-hazardous to water and into water hazard classes (WHC); determination of floating liquid substances as being generally hazardous to water

1 Basic principles

1.1 The terms used in this Appendix, especially those concerning the toxic properties and effects of substances and mixtures on the environment, are used within the meaning of Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006 (OJ L 353 of 31 December 2008, p. 1, L 16 of 20 January 2011, p. 1), as last amended by Regulation (EU) No. 286/2011 (OJ L 83 of 30 March 2011, p. 1), as amended, and Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (OJ EG No. 196, p. 1), as last amended by Directive 2009/2/EC (OJ L 11 of 16 January 2009, p. 6).

1.2 Carcinogenic substances are defined as all substances to be classified

a) as Category 1A or Category 1B carcinogenic substances (H350: 'May cause cancer') in accordance with Annex VI, Table 3.1 of Regulation (EC) No. 1272/2008,
b) as Category 1 or Category 2 carcinogenic substances (R45: 'May cause cancer') in accordance with Annex VI, Table 3.2 of Regulation (EC) No. 1272/2008, or
c) as Category 1A or Category 1B carcinogenic substances (H350: 'May cause cancer') in accordance with Annex I to Regulation (EC) No. 1272/2008.

Substances labelled as carcinogenic in a publication from the Federal Ministry of Labour and Social Affairs in accordance with § 20(4) of the Order on hazardous substances of 26 November 2010 (Federal Law Gazette I pp. 1643, 1644), as last amended by Article 2 of the Act of 28 July 2011 (Federal Law Gazette I p. 1622), are also cancer-producing. Substances that only have carcinogenic effects when inhaled are not regarded as carcinogenic when determining the water hazard class.

1.3 Floating liquid substances are all liquid substances that possess the following physical properties under normal conditions:

a) a density of less than or equal to 1 000 kg/m^3,
b) a vapour pressure of less than or equal to 0.3 kPa, and
c) a water solubility of less than or equal to 1 g/l.

1.4 If a multiplication factor (M factor) is laid down in relation to substances on account of their high aquatic toxicity in accordance with Article 10(2) of Regulation (EC) No. 1272/2008, in conjunction with Annex I Part 4 Section 4.1.3.5.5.5 of Regulation (EC) No. 1272/2008, this multiplication factor must be taken into account when determining the percentage of a substance in mixtures.

2 Classification of substances and mixtures as non-hazardous to water

2.1 Substances

Substances are deemed to be non-hazardous to water if they meet all of the requirements mentioned below:

a) The sum as per point 4.4 is zero.
b) A liquid substance possesses a water solubility of less than 10 mg/l.
c) A solid substance possesses a water solubility of less than 100 mg/l.
d) There is no known test according to which the acute toxicity in a species of fish (96 h LC_{50}) or species of water flea (48 h EC_{50}) or the inhibition of algae growth (72 h IC_{50}) is below the limit of solubility. Valid tests must have been conducted on two of the aforementioned organisms,
e) A liquid organic substance is easily biodegradable.
f) A solid organic substance is either easily biodegradable or does not have an increased bioaccumulation potential.
g) A substance which is hazardous to water does not originate as a result of easy biodegradability or abiotic degradability.
h) The substance is not a floating liquid substance pursuant to point 1.3.

2.2 Mixtures

Mixtures are deemed to be non-hazardous to water if they meet all of the requirements mentioned below:

a) The content of WHC 1 substances is less than 3 % by mass.
b) The content of WHC 2 substances is less than 0.2 % by mass.
c) The content of WHC 3 substances is less than 0.2 % by mass.
d) The content of unidentified substances is less than 0.2 % by mass.
e) No carcinogenic substances as per point 1.2 were purposefully added to the mixture.
f) No substances under WHC 3 were purposefully added to the mixture.
g) No substances with unknown water hazard properties were purposefully added to the mixture.
h) No dispersants or emulsifiers were purposefully added to the mixture.
i) The mixture does not float in bodies of water situated aboveground.

If it is necessary to factor in an M factor as per point 1.4 in the case of a WHC 2 or WHC 3 substance on account of its high aquatic toxicity, the percentage of the substance in question is multiplied by this factor. The resulting product is used to determine the percentage by mass within the meaning of sentence 1 letters b and c.

3 Determination of floating liquid substances and mixtures as being generally hazardous to water

3.1 Floating liquid substances as per point 1.3 are deemed to be generally hazardous to water if they meet the requirements pursuant to point 2.1 letters a to g.

3.2 The floating liquid substances as per point 3.1 are published in the Federal Gazette by the Federal Environment Agency. The Federal Environment Agency shall also provide a search function on the internet which can be used to ascertain the substances notified pursuant to sentence 1.

3.3 A floating mixture comprising floating liquid substances as per point 3.1 and substances that are non-hazardous to water shall be regarded as being generally hazardous to water.

4 Classification of substances into water hazard classes

4.1 Methodical guidelines

The classification is based on scientific tests on the substance in question in accordance with the stipulations of Council Regulation (EC) No. 440/2008 of 30 May 2008 laying down test methods pursuant to Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (OJ L 142 of 31 May 2008, p. 1), as last amended by Regulation (EU) No. 1152/2010 (OJ L 324 of 9 December 2010, p. 13), as amended.
If

a) risk phrases as per Appendices I and VI to Directive 67/548/EEC or
b) hazard statements as per Annexes I, II and VI to Regulation (EC) No. 1272/2008, as amended,

have been derived from these scientific tests in relation to the substance in question, evaluation points in accordance with point 4.2 shall be assigned to the risk phrases and/or hazard statements.
If scientific tests on acute oral or dermal toxicity or environmental effects have not been conducted in relation to the substance in question, precautionary points in accordance with point 4.3 shall be assigned to the substance.
The water hazard class as per point 4.4 is ascertained from the sum of the evaluation and precautionary points for the respective substance.

4.2 Risk phrases, hazard statements and evaluation points

The following evaluation points are assigned to the risk phrases or hazard statements within the meaning of point 4.1 sentence 2:

Risk phrase	**Descriptions of the special risks**	**Priority over other risk phrases**	**Evaluation points**
R21	Harmful in contact with skin	not considered in addition to R25, R23/25, R28 or R26/28	1
R22	Harmful if swallowed	not considered in addition to R24, R23/24, R27 or R26/27	1
R24	Toxic in contact with skin	not considered in addition to R28 or R26/28	3
R25	Toxic if swallowed	not considered in addition to R27 or R26/27	3
R27	Very toxic in contact with skin		4
R28	Very toxic if swallowed		4
R29	Contact with water liberates toxic gas		2
R33	Danger of cumulative effects		2
R40*	Limited evidence of a carcinogenic effect	not considered in addition to R68	2
R45*	May cause cancer		9
R46	May cause heritable genetic damage	not considered in addition to R45	9
R50	Very toxic to aquatic organisms		6
R52	Harmful to aquatic organisms		3
R53	May cause long-term adverse effects in the aquatic environment		3
R60	May impair fertility		4

Risk phrase	Descriptions of the special risks	Priority over other risk phrases	Evaluation points
R61	May cause harm to the unborn child	not considered in addition to R60	4
R62	Possible risk of impaired fertility	not considered in addition to R61	2
R63	Possible risk of harm to the unborn child	not considered in addition to R60 and R62	2
R65	Harmful: may cause lung damage if swallowed	not considered in addition to R21 and R22	1
R68	Possible risk of irreversible effects	not considered in addition to R40	2
R15/29	Contact with water liberates toxic, extremely flammable gas		2
R20/21	Harmful by inhalation and in contact with skin	not considered in addition to R25 or R28	1
R20/22	Harmful by inhalation and if swallowed	not considered in addition to R24 or R27	1
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed		1
R21/22	Harmful in contact with skin and if swallowed		1
R23/24	Toxic by inhalation and in contact with skin	not considered in addition to R28	3
R23/25	Toxic by inhalation and if swallowed	not considered in addition to R27	3
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed		3
R24/25	Toxic in contact with skin and if swallowed		3
R26/27	Very toxic by inhalation and in contact with skin		4
R26/28	Very toxic by inhalation and if swallowed		4
R26/27/28	Very toxic by inhalation, in contact with skin and if swallowed		4
R27/28	Very toxic in contact with skin and if swallowed		4
R39/24	Toxic: danger of very serious irreversible effects in contact with skin		4
R39/25	Toxic: danger of very serious irreversible effects if swallowed		4
R39/23/24	Toxic: danger of very serious irreversible effects through inhalation and in contact with skin		4
R39/23/25	Toxic: danger of very serious irreversible effects through inhalation and if swallowed		4
R39/24/25	Toxic: danger of very serious irreversible effects in contact with skin and if swallowed		4

Risk phrase	Descriptions of the special risks	Priority over other risk phrases	Evaluation points
R39/23/24 /25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed		4
R39/27	Very toxic: danger of very serious irreversible effects in contact with skin		4
R39/28	Very toxic: danger of very serious irreversible effects if swallowed		4
R39/26/27	Very toxic: danger of very serious irreversible effects through inhalation and in contact with skin		4
R39/26/28	Very toxic: danger of very serious irreversible effects through inhalation and if swallowed		4
R39/27/28	Very toxic: danger of very serious irreversible effects in contact with skin and if swallowed		4
R39/26/27 /28	Very toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed		4
R48/21	Harmful: danger of serious damage to health by prolonged exposure in contact with skin		2
R48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed		2
R48/20/21	Harmful: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin		2
R48/20/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed		2
R48/21/22	Harmful: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed		2
R48/20/21 /22	Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed		2
R48/24	Toxic: danger of serious damage to health by prolonged exposure in contact with skin		4
R48/25	Toxic: danger of serious damage to health by prolonged exposure if swallowed		4
R48/23/24	Toxic: danger of serious damage to health by prolonged exposure through inhalation and in contact with skin		4
R48/23/25	Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed		4
R48/24/25	Toxic: danger of serious damage to health by prolonged exposure in contact with skin and if swallowed		4

Risk phrase	**Descriptions of the special risks**	**Priority over other risk phrases**	**Evaluation points**
R48/23/24 /25	Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed		4
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment		8
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment		6
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment		4
R68/21	Harmful: possible risk of irreversible effects in contact with skin		2
R68/22	Harmful: possible risk of irreversible effects if swallowed		2
R68/20/21	Harmful: possible risk of irreversible effects through inhalation and in contact with skin		2
R68/20/22	Harmful: possible risk of irreversible effects through inhalation and if swallowed		2
R68/21/22	Harmful: possible risk of irreversible effects in contact with skin and if swallowed		2
R68/20/21 /22	Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed		2

* No evaluation points are assigned to substances which only work through exposure via inhalation.

Hazard statement	Description of the hazard statements	Priority over other hazard statements	Evaluation points
EUH029	Contact with water liberates toxic gas		2
H300	Fatal if swallowed		4
H301	Toxic if swallowed	not considered in addition to H310	3
H302	Harmful if swallowed	not considered in addition to H311 or H310	1
H304	May be fatal if swallowed and enters airways	not considered in addition to H312 and H302	1
H310	Fatal in contact with skin	not considered in addition to H300	4
H311	Toxic in contact with skin	not considered in addition to H301 or H300	3
H312	Harmful in contact with skin	not considered in addition to H302, H301 or H300	1
H340*	May cause genetic defects (specify exposure route if it is conclusively proven that this risk does not present itself with any other exposure route)	not considered in addition to H350	9
H341*	Suspected of causing genetic defects (specify exposure route if it is conclusively proven that this risk does not present itself with any other exposure route)	not considered in addition to H351	2
H350*	May cause cancer (specify exposure route if it is conclusively proven that this risk does not present itself with any other exposure route)		9
H351*	Suspected of causing cancer (specify exposure route if it is conclusively proven that this risk does not present itself with any other exposure route)	not considered in addition to H341	2
H360D	May damage the unborn child	not considered in addition to H360F	4
H360F	May damage fertility		4
H361d	Suspected of damaging the unborn child	not considered in addition to H360F and H361F	2
H361f	Suspected of damaging fertility	not considered in addition to H360D	2
H370*	Causes damage to organs (or specify all affected organs, if known) (specify exposure route if it is conclusively proven that this risk does not present itself with any other exposure route)		4
H371*	May cause damage to organs (or specify all affected organs, if known) (specify exposure route if it is conclusively proven that this risk does not present itself with any other exposure route)		2

Hazard statement	Description of the hazard statements	Priority over other hazard statements	Evaluation points
H372*	Causes damage to organs (specify all affected organs) through prolonged or repeated exposure (specify exposure route if it is conclusively proven that this risk does not present itself with any other exposure route)		4
H373*	May cause damage to organs (specify all affected organs) through prolonged or repeated exposure (specify exposure route if it is conclusively proven that this risk does not present itself with any other exposure route)		2
H400	Very toxic to aquatic life	not considered in addition to H410	6
H410	Very toxic to aquatic life with long-lasting effects		8
H411	Toxic to aquatic life with long-lasting effects		6
H412	Harmful to aquatic life with long-lasting effects		4
H413	May cause long-lasting harmful effects to aquatic life		3

* No evaluation points are assigned to substances which only work through exposure via inhalation.

4.3 Precautionary points

4.3.1 If there is no information available on a substance within the meaning of point 4.1 sentences 1 and 2 concerning acute oral and dermal toxicity, four precautionary points shall be assigned to the substance.

4.3.2 If there is no information available on a substance within the meaning of point 4.1 sentences 1 and 2 concerning effects on the environment, eight precautionary points shall be assigned to the substance.
The number of precautionary points is reduced by two if proof is furnished that the substance is easily biodegradable and the potential for bioaccumulation has been ruled out.

4.3.3 If no risk phrases or hazard statements on effects on the environment within the meaning of point 4.1 sentence 2 are assigned to a substance and there are known tests within the meaning of point 4.1 sentence 1 on the substance's effects on the environment, the following precautionary points shall be assigned:

a) 8 precautionary points if a test is known according to which acute toxicity in a species of fish (96 h LC_{50}), or species of water flea (48 h LC_{50}), or the inhibition of algae growth (72 h IC_{50}) is not more than 1 mg/l and

aa) there is no proof that the substance is easily biodegradable or

bb) there is no proof to rule out the potential for bioaccumulation,

b) six precautionary points if a test is known according to which acute toxicity in a species of fish (96 h LC_{50}), or species of water flea (48 h LC_{50}), or the inhibition of algae growth (72 h IC_{50}) is more than 1 mg/l but not more than 10 mg/l and

aa) there is no proof that the substance is easily biodegradable or

bb) there is no proof to rule out the potential for bioaccumulation,

c) 4 precautionary points if a test is known according to which acute toxicity in a species of fish (96 h LC_{50}), or species of water flea (48 h LC_{50}), or the inhibition of algae growth (72 h IC_{50}) is more than 10 mg/l but not more than 100 mg/l and there is no proof that the substance is easily biodegradable in bodies of water,

d) 2 precautionary points if only tests are known according to which acute toxicity in a species of fish (96 h LC_{50}), or species of water flea (48 h LC_{50}), or the inhibition of algae growth (72 h IC_{50}) exceeds 100 mg/l and

aa) there is no proof that the substance is easily biodegradable in bodies of water, and

bb) there is no proof to rule out the potential for bioaccumulation.

4.4 Establishing the water hazard class

The sum is made up of the evaluation and precautionary points for the substance in question, which are determined, in turn, in accordance with points 4.2 and 4.3. One of the following water hazard classes is assigned according to this sum:

If the sum ranges from 0 to 4:	WHC 1
If the sum ranges from 5 to 8:	WHC 2
If the sum exceeds 8:	WHC 3

5 Classification of mixtures into water hazard classes

5.1 Basic principles

5.1.1 The water hazard class of mixtures is calculated based on the water hazard classes of the substances contained therein. In this regard, unidentified substances and substances pursuant to § 3(4) sentence 1 shall be treated as substances in water hazard class 3.

5.1.2 If solid mixtures are used in producing liquid mixtures and if these solid mixtures have not been classified as non-hazardous to water or have been classified in a water hazard class, the solid mixtures shall be treated as substances in water hazard class 3 when deriving the water hazard class of the liquid mixture. If the solid mixtures as per points 5.2 or 5.3 have been classified into a water hazard class, they shall be treated as substances of this water hazard class when deriving the water hazard class of the liquid mixture. Sentence 2 shall apply, *mutatis mutandis,* to classified liquid mixtures.

5.1.3 Carcinogenic substances as per point 1.2 must be taken into account beginning with a percentage by mass of 0.1 % relative to the individual substance. If other percentages by mass are decisive for classifying the mixture as carcinogenic (R45 or H350) pursuant to Annex VI to Regulation (EC) No. 1272/2008 and Annex II to Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations (OJ L 200 of 30 July 1999, p. 1, L 6 of 10 January 2002, p. 71), as last amended by Regulation (EC) No. 1272/2008 (OJ L 353 of 31 February 2008, p. 1), or in accordance with Annexes I and II to Regulation (EC) No. 1272/2008, these shall apply. Added carcinogenic substances must always be taken into consideration in the derivation of WHC 1.

5.1.4 Non-carcinogenic substances with a percentage by mass of less than 0.2 % relative to the individual substance are not taken into account.

If it is necessary to factor in an M factor as per point 1.4 in the case of a WHC 2 or WHC 3 substance on account of its high aquatic toxicity, the percentage of the substance in question is multiplied by this factor. The resulting product is used to determine the percentage by mass.

5.1.5 If scientific tests exist within the meaning of point 4.1 sentence 1 on acute oral or dermal toxicity or on the aquatic toxicity of the mixture, by way of deviation from points 5.1.1, 5.1.2 and 5.1.4, the water hazard class can be determined using these test results. Evaluation points in accordance with point 5.3 are assigned to the test results. If specific scientific tests on acute oral or dermal toxicity or environmental effects have not been conducted in relation to the mixture in question, precautionary points in accordance with point 5.3 shall be assigned to the mixture.
The water hazard class is determined based on the sum of the evaluation and precautionary points for the mixture in question.
If both methods result in different water hazard classes, the water hazard class determined on the basis of the test data obtained from the mixture shall be decisive.

5.1.6 If a mixture's water hazard class was determined on the basis of the test data, a repeat test of the mixture can be dispensed with if only one substance has been replaced and

a) the new substance has already been classified and is classified in the same or a lower water hazard class as the replaced substance or the new substance is classified as being non-hazardous to water, and

b) the new substance has no known properties that could increase the mixture's water hazard potential.

5.2 Mathematical derivation of the water hazard class based on the water hazard classes of the substances contained

5.2.1 Derivation of water hazard class 3

The mixture is classified in WHC 3 if one of the following preconditions is satisfied:

a) The mixture contains WHC 3 carcinogenic substances.

b) The sum of the percentages by mass of all WHC 3 substances contained in the mixture is 3 % or above.

If it is necessary to factor in an M factor as per point 1.4 in the case of a WHC 3 substance on account of its high aquatic toxicity, the percentage of the substance in question is multiplied by this factor. The resulting product is used to determine the percentage by mass within the meaning of sentence 1 letter b.

5.2.2 Derivation of water hazard class 2

If none of the preconditions mentioned under point 5.2.1 apply, the mixture shall be classified as WHC 2 if one of the following preconditions is satisfied:

a) The mixture contains WHC 2 carcinogenic substances.

b) The sum of the percentages by mass of all WHC 2 substances contained in the mixture is 5 % or above.

c) The mixture contains WHC 3 non-carcinogenic substances with a percentage by mass of 0.2 % or above, relative to the individual substance.

d) The sum of the percentages by mass of all the WHC 3 non-carcinogenic substances contained in the mixture is less than 3 %.

If it is necessary to factor in an M factor as per point 1.4 in the case of a WHC 2 or WHC 3 substance on account of its high aquatic toxicity, the percentage of the substance in question is multiplied by this factor. The resulting product is used to determine the percentage by mass within the meaning of sentence 1 letters b to d.

5.2.3 Derivation of water hazard class 1

If none of the preconditions mentioned under points 5.2.1 and 5.2.2 apply, the mixture shall be classified as WHC 1 if one of the following preconditions is satisfied:

a) The mixture contains added carcinogenic substances below the threshold for consideration specified under point 5.1.3.

b) The mixture contains WHC 2 non-carcinogenic substances with a percentage by mass of 0.2 % or above, relative to the individual substance.

c) The sum of the percentages by mass of all the WHC 2 non-carcinogenic substances contained in the mixture is less than 5 %.

d) The sum of the percentages by mass of all WHC 1 substances contained in the mixture is 3 % or above.

e) The mixture does not meet all of the preconditions for classification as non-hazardous to water specified under point 2.2.

If it is necessary to factor in an M factor as per point 1.4 in the case of a WHC 2 substance on account of its high aquatic toxicity, the percentage of the substance in question is multiplied by this factor. The resulting product is used to determine the percentage by mass within the meaning of sentence 1 letters b and c.

5.3 Derivation of the water hazard class based on test results obtained from the mixture

5.3.1 Consideration of acute oral or dermal toxicity determined on the mixture

If there are known scientific tests within the meaning of point 4.1 sentence 1 on acute oral or dermal toxicity, it must be ascertained whether the mixture is to be classified in accordance with Annex II to Directive 1999/45/EC or Annexes I and II to Regulation (EC) No. 1272/2008.

Sentence 1 shall apply accordingly if these scientific tests are known for all substances contained therein, but not for the mixture itself. If risk phrases or hazard statements concerning acute oral or dermal toxicity are derived from the test results as per Annex II to Directive 1999/45/EC or Annexes I and II to Regulation (EC) No. 1272/2008, the evaluation points mentioned under point 4.2 shall be assigned to these.

4 precautionary points are assigned to the mixture if there are no known scientific tests within the meaning of point 4.1 sentence 1 on acute oral or dermal toxicity for both the mixture and all the substances contained therein.

5.3.2 Consideration of the test results on environmental effects obtained from the mixture

If there are known scientific tests within the meaning of point 4.1 sentence 1 on acute toxicity in a species of fish (96 h LC_{50}) or species of water flea (48 h EC_{50}), or regarding the inhibition of algae growth (72 h IC_{50}), for at least two of the aforementioned organisms, the following evaluation points shall be assigned:

a) 8 evaluation points if the toxicity in the most sensitive organism is 1 mg/l or less,

b) 6 evaluation points if the toxicity in the most sensitive organism is more than 1 and up to 10 mg/l,

c) 4 evaluation points if the toxicity in the most sensitive organism is more than 10 and up to 100 mg/l,

d) 2 evaluation points if the toxicity in the most sensitive organism is more than 100 mg/l or above the concentration that can be attained in water.

If there are known scientific tests within the meaning of point 4.1 sentence 1 on acute toxicity in a species of fish, acute toxicity in a species of water flea and regarding the inhibition of

algae growth, or if there are only scientific tests for one of these organisms, 8 precautionary points are assigned to the mixture.
If it is known that one of the aforementioned organisms is particularly sensitive to a substance contained in the mixture, the test on the mixture must also be conducted using this organism.
If proof is furnished that all substances in a mixture are each easily biodegradable and the potential for bioaccumulation has been ruled out, the evaluation or precautionary points established in relation to the environmental effects are reduced by two.

5.3.3 Consideration of other test results obtained from the mixture
If there are known scientific tests within the meaning of point 4.1 sentence 1 from which a risk phrase or hazard statement referred to in point 4.2 is derived in relation to the mixture in accordance with Annexes II and III to Directive 1999/45/EC or Annexes I and II to Regulation (EC) No. 1272/2008 (with the exception of R21 to R28, R50 to R53 and R65, each individually or in combination, or H300, H301, H302, H304, H310, H311, H312, H400 and H410 to H413, each individually or in combination), the evaluation points cited therein are assigned.

5.3.4 Establishing the water hazard class
The sum is made up of the evaluation and precautionary points for the mixture in question, which are determined, in turn, in accordance with points 5.3.1 to 5.3.3. In accordance with this sum, a water hazard class is assigned to the mixture in corresponding application of point 4.4.

Appendix 2
(re § 4(3), § 8(3) and § 10(3))

Documenting the self-classification of substances and mixtures

1 Documentation form for substances

1.1 Documentation form 1 shall be used to document the self-classification of substances pursuant to § 4(3).

1.2 Information concerning the self-classification of substances

1.2.1 The following data must be documented in relation to the self-classification of a substance:

a) the name and address of the operator and the date the documentation was compiled,
b) the unambiguous chemical designation of the substance,
c) the EC number and, if present, the CAS [Chemical Abstracts Service] number and index number as per Annex VI to Regulation (EC) No. 1272/2008,
d) hazard statements or risk phrases in accordance with Appendix 1 point 4.1 sentence 2,
e) multiplication factors pursuant to Appendix 1 point 1.4,
f) concentration limits as per Annex VI to Regulation (EC) No. 1272/2008,
g) assigned evaluation points in accordance with Appendix 1 point 4.2,
h) assigned precautionary points in accordance with Appendix 1 point 4.3,
i) the sum as per Appendix 1 point 4.4, and
j) the proposal for classifying a substance as non-hazardous to water or in a water hazard class.

1.2.2 In addition to the data mentioned under point 1.2.1, the following information is to be documented in relation to a substance if it exists and is available to the operator:

a) aggregate state, vapour pressure, relative density,
b) water solubility, distribution behaviour (log P_{OW} or BCF),
c) acute oral and dermal toxicity,
d) toxicity in two aquatic species from two different stages in the food chain, and
e) biodegradability.

If a substance is to be classified as non-hazardous to water, the operator is obliged to document in full the information under sentence 1.

1.2.3 The following data must also be documented for the classification of polymers:

a) the average molar mass and molecular weight range for which the classification is to apply,
b) the residual monomer content if this figure is above a percentage by mass of 0.2 %,
c) the content and identity of additives and impurities if their content exceeds a percentage by mass of 0.2 %, and
d) the content and identity of carcinogenic substances pursuant to Appendix 1 point 1.2 if their content exceeds a percentage by mass of 0.1 %.

By way of deviation from point 1.2.1, the documentation of polymers is also deemed to be complete if no EC or CAS number is available.

2 Documentation form for mixtures

Documentation form 2 shall be used for documenting the self-classification of liquid or gaseous mixtures in accordance with § 8(3) and in the case of the self-classification of solid mixtures into water hazard classes as per § 10(3) sentence 1.

3 Documentation form for solid mixtures classified as being non-hazardous to water

Documentation form 3 shall be used for documenting the self-classification of solid mixtures as non-hazardous to water in accordance with § 10(3) sentence 1.

Documentation form 1
Documenting the self-classification of a substance

To be filled in by the documentation centre	
ID No:	
Received on:	
Abbreviation:	

Information pertaining to the facility operator

Company	
Department	
Contact person	
Street/PO Box	
Postcode, city/town	
Country (if the operator's place of business is located outside the Federal Republic of Germany)	

Date	
Email address	
Telephone/Fax	

Information relating to the substance

Unambiguous chemical designation of the substance[2] ☐ **EC name** ☐ **CAS name[1]**			
Synonymous designations (English designation of the substance)			
	CAS No	**EC No[2]**	**Index No[3]**
Water solubility in mg/l at 20 °C		**Relative density at 20 °C**	
Aggregate state at 20 °C		**Vapour pressure in kPa at 20 °C**	

Additional information in the case of polymers

Average molar mass	
Molecular weight range[4]	
Identity and content of residual monomers, additives and impurities > 0.2 % by mass	
Identity and content of carcinogenic substances > 0.1 % by mass	
Concentration limits as per Annex VI to Regulation (EC) No. 1272/2008	

Hazard statements as per Appendix III to Regulation (EC) No. 1272/2008

Hazard statements Toxicity in mammals		□ not classified on the basis of available data[1] □ not classified on the basis of missing data[1]
Hazard statements Risk to the environment		□ not classified on the basis of available data[1] □ not classified on the basis of missing data[1]
Multiplication factor		(in accordance with Article 10 of Regulation (EC) No. 1272/2008)

[1] Mark with a cross where applicable.
[2] It is also necessary to specify the EC number and unambiguous chemical name and/or EC name for substances whose identity markers are to be treated as confidential.
[3] Index number as per Annex VI to Regulation (EC) No. 1272/2008.
[4] Determined by such means as size exclusion chromatography (SEC) or gel permeations chromatography (GPC).

Risk phrase classification as per Annex III to Directive 67/548/EEC

Risk phrases (R-phrases) Toxicity in mammals		□ not classified on the basis of available data[1] □ not classified on the basis of missing data[1]
Risk phrases (R-phrases) Risk to the environment		□ not classified on the basis of available data[1] □ not classified on the basis of missing data[1]

Test results[2]

Acute oral/dermal toxicity	**Species of mammal**	**Duration/LD_X/ application route**	**Value in mg/kg of body weight**	**Source[3] E**	**L**	**S**	**U**
				□	□	□	□
Aquatic toxicity	**Species name**	**Duration/end point**	**Value in mg/l**				
Fish				□	□	□	□
Water flea				□	□	□	□
Algae				□	□	□	□
Other organisms				□	□	□	□
Bio degradability	**Test method**	**Degree of decomposition after 28 days as a %**	**10-day window complied with?**				
			□ yes[1] □ no[1]	□	□	□	□
Potential for bioaccumulation	**log P_{OW}**		□ measured[1] □ calculated[1]	□	□	□	□
	BCF		□ measured[1] □ calculated[1]	□	□	□	□

Evaluation points

	Toxicity in mammals	**Risk to the environment**
Evaluation points based on risk phrases or hazard statements		
or evaluation points based on test results		
Precautionary points		
Sum		

Overall evaluation

WHC[4]	

Operator's comments on the documentation (such as findings which justify a classification different from that in Appendix 1 to the Ordinance on facilities for handling substances that are hazardous to water)

The operator must notify the Federal Environment Agency immediately of any findings that result in a change to the WHC.

Operator's signature and stamp, if applicable

[1] Mark with a cross where applicable!
[2] This information is mandatory for substances that are non-hazardous to water ('nwg' substances').
[3] Please tick as appropriate: E = Company's own study; L = Literature value; S = Secondary literature; U = Investigation report enclosed.
[4] Enter 'nwg' for substances that are non-hazardous to water.

Documentation form 2
Documenting the self-classification of a mixture

Competent authority's notice of receipt (if applicable):

Information pertaining to the facility operator

Company		
Department		
Contact person		
Street/PO Box	**Date**	
Postcode, city/town	**Email address**	
Country (if the operator's place of business is located outside the Federal Republic of Germany)	**Telephone/Fax**	

Information relating to the identity of the mixture

Designation	
Trade name	

Derivation of the WHC in accordance with Appendix 1 point 5.2 of the Ordinance on facilities for handling substances that are hazardous to water

		yes	no
Percentage by mass of carcinogenic substances in accordance with Appendix 1 point 5.1.3 of the Ordinance on facilities for handling substances that are hazardous to water ≥ 0.1%[1]	WHC 2		
	WHC 3		
Carcinogenic substances in accordance with Appendix 1 point 1.2 of the Ordinance on facilities for handling substances that are hazardous to water were added to the mixture.			
Dispersants were added to the mixture			

Substances contained in the mixture	**Sum of the percentages by mass as a %**
WHC 3	
WHC 3 with M factor[2]	
WHC 2	
WHC 2 with M factor[2]	
WHC 1	
Floating liquid substances as per Appendix 1 point 3.1 of the Ordinance on facilities for handling substances that are hazardous to water	
Substances that are non-hazardous to water ('nwg' substances)	
Unidentified substances and substances as per § 3(4) sentence 1 (pursuant to Appendix 1 point 5.1.1 sentence 2 of the Ordinance on facilities for handling substances that are hazardous to water) of the Ordinance on facilities for handling substances that are hazardous to water	
Resulting WHC[3]	

[1] Other percentages by mass as per Appendix 1 point 5.1.3 sentence 2 of the Ordinance on facilities for handling substances that are hazardous to water may be decisive.

[2] Multiplication factor (M factor) as per Appendix 1 point 1.4 of the Ordinance on facilities for handling substances that are hazardous to water.
Multiply the percentages by mass by the respective M factors.

[3] Enter 'nwg' for substances that are non-hazardous to water.

Derivation of the WHC from test results in accordance with Appendix 1 point 5.3 of the Ordinance on facilities for handling substances that are hazardous to water

Acute oral/dermal toxicity	**Species of mammal**	**Duration/LD_X/ application route**	**Value in mg/kg of body weight**	**Source[1] E**	**L**	**S**	**U**
				□	□	□	□
Aquatic toxicity (in at least two aquatic species from two different stages in the food chain)	**Species name**	**Duration/end point**	**Value in mg/l**				
Fish		(96h) LC_{50}		□	□	□	□
Water flea		(48h) EC_{50}		□	□	□	□
Algae		(72h) IC_{50}		□	□	□	□
Other organisms				□	□	□	□
Bio degradability	All substances in this mixture are easily biodegradable in accordance with OECD 301.				□ yes □ no		
Potential for bioaccumulation	The potential for bioaccumulation is ruled out in relation to all substances in this mixture.				□ yes □ no		
Other categories of danger (in accordance with Appendix 1 point 5.3.3 of the Ordinance on facilities for handling substances that are hazardous to water)				□	□	□	□

Evaluation points

	Toxicity in mammals	**Risk to the environment**
Evaluation points based on test results		
Precautionary points		
Evaluation points in accordance with Appendix 1 point 5.3.3 of the Ordinance on facilities for handling substances that are hazardous to water		
Sum		

Overall evaluation

WHC[2]	

Operator's comments on the documentation (such as findings which justify a classification different from that in Appendix 1 to the Ordinance on facilities for handling substances that are hazardous to water)

The operator must notify the competent authority immediately of any findings that result in a change to the WHC.

Operator's signature and stamp, if applicable

[1] Please tick as appropriate: E = Company's own study; L = Literature value; S = Secondary literature; U = Investigation report enclosed.

[2] Enter 'nwg' for substances that are non-hazardous to water.

Documentation form 3

Documenting the self-classification of a solid mixture which is non-hazardous to water

Competent authority's notice of receipt (if applicable):

Information pertaining to the facility operator

Company		
Department		
Contact person		
Street/PO Box	**Date**	
Postcode, city/town	**Email address**	
Country (if the operator's place of business is located outside the Federal Republic of Germany)	**Telephone/Fax**	

Information relating to the mixture

Description	

Classification by the operator

The mixture is **classified as non-hazardous to water** since

- ☐ the mixture or the substances contained therein are published in the Federal Gazette as being non-hazardous to water (§ 3(2) sentence 2 of the Ordinance on facilities for handling substances that are hazardous to water),
- ☐ the mixture can be classified as non-hazardous to water in accordance with Appendix 1 point 2.2 of the Ordinance on facilities for handling substances that are hazardous to water (§ 10(1) point 1 of the Ordinance on facilities for handling substances that are hazardous to water),
- ☐ the mixture may be incorporated openly in accordance with other legislation, even at hydrogeologically unfavourable locations and without technical safeguards (§ 10(1) point 2 of the Ordinance on facilities for handling substances that are hazardous to water),
- ☐ the mixture complies with placement class Z 0 or Z 1.1 "Requirements pertaining to the material recovery of waste - Technical regulations" (§ 10(1) point 3 of the Ordinance on facilities for handling substances that are hazardous to water).

Operator's comments on the documentation (such as findings which justify a classification different from that in Appendix 1 to the Ordinance on facilities for handling substances that are hazardous to water)

The operator must notify the competent authority immediately of any findings on the basis of which the solid mixture shall no longer be classified as being non-hazardous to water.

Operator's signature and stamp, if applicable

Appendix 3
(re § 45(4) sentence 2)
Instruction sheet on operating regulations and the code of conduct when operating fuel oil consumer installations

Please display near the facility such that it is easily visible!

Anyone operating a fuel oil consumer installation is responsible for ensuring its proper operation. In accordance with § 47(1) of the Ordinance on facilities for handling substances that are hazardous to water, the operator must particularly establish at regular intervals that the facility does not have any defects which could result in fuel oil being released.

Particular locality:	O Water protection area, protected zone: ..... O Mineral spring protection area ..... O Flood plain .....
Inspection obligation incumbent upon experts: (§ 47(2) and (3) of the Ordinance on facilities for handling substances that are hazardous to water)	O During commissioning Date of commissioning test: ..... O At regular intervals, on a recurring basis every 2.5/5 years Next inspection: ..... Next inspection: ..... Next inspection: .....
Requirement to use a specialist company: (§ 46 of the Ordinance on facilities for handling substances that are hazardous to water)	O The facility does not require a specialist company O The facility requires a specialist company

If there is a risk that fuel oil could escape (or has already escaped), damage control measures must be taken forthwith (§ 25(1) of the Ordinance on facilities for handling substances that are hazardous to water).

One of the following authorities must be notified immediately of the escape of a not insignificant quantity of fuel oil if the substances have found, or could find, their way into the subsoil, sewer system or an aboveground body of water (§ 25(2) of the Ordinance on facilities for handling substances that are hazardous to water):

Fire brigade	Tel.: 112
Police station	Tel.: 110
Local competent authority:	Tel.: ..... Address: .....

Appendix 4
(re § 45(4) sentences 2 and 3)
Instruction sheet on operating regulations and the code of conduct when handling substances that are hazardous to water

Please display near the facility such that it is easily visible!

Anyone operating a facility is responsible for ensuring its proper operation. In accordance with § 47(1) of the Ordinance on facilities for handling substances that are hazardous to water, the operator must particularly establish at regular intervals that the facility does not have any defects which could result in substances that are hazardous to water being released.

Plant designation:	.....
Filling medium (substance that is hazardous to water):	..... WHC .....
Particular locality:	O Water protection area, protected zone: ..... O Mineral spring protection area, protected zone: O Flood plain .....
Requirement to use a specialist company: (§ 46 of the Ordinance on facilities for handling substances that are hazardous to water)	O The facility does not require a specialist company O The facility requires a specialist company

If there is a risk that substances that are hazardous to water could escape (or have already escaped), damage control measures must be taken forthwith (§ 25(1) of the Ordinance on facilities for handling substances that are hazardous to water).

One of the following authorities must be notified immediately of the escape of a not insignificant quantity of a substance that is hazardous to water if the substances have found, or could find, their way into the subsoil, sewer system or an aboveground body of water (§ 25(2) of the Ordinance on facilities for handling substances that are hazardous to water):

Fire brigade	Tel.: 112
Police station	Tel.: 110
Local competent authority:	Tel.: ..... Address: .....
Company contact person:	Tel.: ..... Mr/Mrs: .....

Appendix 5
(re § 47(2))

Inspection times and intervals for facilities outside protected areas and defined or provisionally secured flood plains

	Facilities[1), 2)]	Inspection times and intervals		
	Column 1	Column 2	Column 3	Column 4
Row 1		Prior to commissioning[3)] or following a significant alteration	Recurrent inspection[4), 5)]	Upon decommissioning of a facility
Row 2	Underground facilities with liquid or gaseous substances that are hazardous to water	A, B, C and D	A, B, C and D every 5 years	A, B, C and D
Row 3	Aboveground facilities with liquid or gaseous substances that are hazardous to water, including fuel oil consumer installations	B, C and D	C and D every 5 years	C and D
Row 4	Facilities with solid substances that are hazardous to water	In excess of 1 000 t	Underground facilities and outdoor facilities in excess of 1 000 t, every 5 years	Underground facilities and outdoor facilities in excess of 1 000 t
Row 5	Facilities for handling substances that are hazardous to water in intermodal transport	In excess of 100 t of substances handled every working day	Facilities with over 100 t of substances handled every working day, every 5 years	Facilities with over 100 t of substances handled every working day
Row 6	Facilities with floating liquid substances	In excess of 100 m^3	In excess of 1 000 m^3, every 5 years	In excess of 1 000 m^3
Row 7	Biogas facilities in which fermentation substrates as per § 2(8) are used exclusively[6)]	In excess of 100 m^3	In excess of 1 000 m^3, every 5 years	In excess of 1 000 m^3
Row 8	Facilities for drawing off and handling, and facilities for loading and unloading ships	B, C and D	B every 10 years; C and D every 5 years	B, C and D

1) Letters A, B, C and D used in the table relate to the hazard levels of the facilities to be inspected pursuant to § 40(1).

2) The data relating to volume and mass included in the table relate to the decisive volume or mass of the substances that are hazardous to water (§ 40) which are handled in the facility.

3) The commissioning test and inspection following a significant alteration of facilities for drawing off and handling includes a repeat examination of the areas used for drawing off or handling after 1 year of operation. The repeat examination does not defer the date of completion of the inspection prior to commissioning.

4) The deadlines for the recurrent inspections begin with the completion of the inspection prior to commissioning or following a significant alteration as per column 2.

5) In order to maintain the deadlines for the recurrent inspections, it is sufficient to perform the inspections by the end of the month in which they are due.

6) The decisive volume of a biogas facility within the meaning of § 40( ).

Appendix 6
(re § 47(3))

Inspection times and intervals for facilities in protected areas and defined or provisionally secured flood plains

	Facilities[1), 2)]	Inspection times and intervals		
	Column 1	Column 2	Column 3	Column 4
Row 1		Prior to commissioning[3)] or following a significant alteration	Recurrent inspection[4), 5)]	Upon decommissioning of a facility
Row 2	Underground facilities with liquid or gaseous substances that are hazardous to water	A, B, C and D[3)]	A, B, C and D every 30 months[4)]	A, B, C and D
Row 3	Aboveground facilities with liquid or gaseous substances that are hazardous to water, including aboveground fuel oil consumer installations	B, C and D	B, C and D every 5 years	B, C and D
Row 4	Facilities with solid substances that are hazardous to water	In excess of 1 000 t	Underground facilities and outdoor facilities in excess of 1 000 t, every 5 years	Underground facilities and outdoor facilities in excess of 1 000 t
Row 5	Facilities for handling substances that are hazardous to water in intermodal transport	In excess of 100 t of substances handled every working day	In excess of 100 t of substances handled every working day, every 5 years	In excess of 100 t of substances handled every working day
Row 6	Facilities with floating liquid substances	In excess of 100 m^3	In excess of 1 000 m^3, every 5 years	In excess of 1 000 m^3
Row 7	Biogas facilities in which fermentation substrates as per § 2(8) are used exclusively[6)]	In excess of 100 m^3	In excess of 1 000 m^3, every 5 years	In excess of 1 000 m^3
Row 8	Facilities for drawing off and handling, and facilities for loading and unloading ships	B, C and D	B, C and D, every 5 years	B, C and D

1) Letters A, B, C and D used in the table relate to the hazard levels of the facilities to be inspected pursuant to § 40(1).

2) The data relating to volume and mass included in the table relate to the decisive volume or mass of the substances that are hazardous to water (§ 40) which are handled in the facility.

3) The commissioning test and inspection following a significant alteration of facilities for drawing off and handling includes a repeat examination of the areas used for drawing off or handling after 1 year of operation. The repeat examination does not defer the date of completion of the inspection prior to commissioning.

4) The deadlines for the recurrent inspections begin with the completion of the inspection prior to commissioning or following a significant alteration as per column 2.

5) In order to maintain the deadlines for the recurrent inspections, it is sufficient to perform the inspections by the end of the month in which they are due.

6) The decisive volume of a biogas facility within the meaning of § 40( ).

Appendix 7
(re § 13(3), § 53(1) sentence 2 point 1 letter a)

Requirements pertaining to liquid manure and slurry installations or silage seepage facilities

1 Definitions

1.1 Liquid manure and slurry installations or silage seepage facilities include, in particular, containers, collecting pits, ground basins, silos, bunker silos, slurry pits and channels, solid manure trays, areas for drawing off together with the associated pipelines, safety devices, joint and gap seals, coatings and linings.

1.2 Collection facilities are all structural and technical facilities for collecting and conveying liquid manure, slurry and silage seepage. They also include dung removal channels and lines, preliminary tanks, pumping stations and the supply line to the preliminary tank, unless they are filled on a regular basis.

2 General requirements

2.1 Only construction products, designs or construction kits in respect of which proofs of usability from the building inspectorate are available, having due regard to the requirements under water legislation, may be used for the facilities.

2.2 Facilities must be planned and built, designed and operated in such a manner that

a) substances that are generally hazardous to water pursuant to § 3(2) sentence 1 points 1 to 5 are unable to escape,

b) leaks in all parts of the facility which are in contact with substances as per letter a can be detected quickly and reliably,

c) escaping substances that are generally hazardous to water pursuant to § 3(2) sentence 1 points 1 to 5 are detected quickly and reliably, and

d) mixtures that may contain escaping substances that are hazardous to water which accumulate during an operational malfunction are recovered or disposed of as per regulations and safely.

2.3 Liquid manure and slurry installations or silage seepage facilities must be impermeable to liquid, stable and resistant to the anticipated mechanical, thermal and chemical influences. Parts of facilities which enclose substances that are hazardous to water must be impermeable to liquid.

2.4 The operator shall commission a specialist company in accordance with § 63 with the establishment and repair of a liquid manure and slurry installation or silage seepage facility unless he himself fulfils the requirements pertaining to a specialist company. This shall not apply to facilities for storing silage seepage with a volume of up to 25 m^3, other liquid manure and slurry installations or silage seepage facilities with a total volume of up to 500 m^3, or to facilities for storing solid manure or ensiled material with a volume of up to 1 000 m^3.

2.5 Containers may not be constructed from wood.

3 Facilities for storing liquid substances that are generally hazardous to water

3.1 Single-walled liquid manure and slurry installations or silage seepage facilities for storing liquid substances that are generally hazardous to water which have a total volume in excess of 25 m^3 must be equipped with a leak detection system. Single-walled pipelines are permitted if they comply with the technical rules.

3.2 Collection and storage facilities must be included in the leak detection system as per point 3.1. In the case of collection and storage facilities beneath stables, a leak detection system can be dispensed with if the retention height is limited to the extent necessary for dung removal and joints and seals in particular are inspected to ensure that they are in proper working order prior to commissioning.

4 Facilities for storing solid manure and ensiled material

4.1 The storage areas of facilities for storing solid manure and ensiled material must be surrounded at the sides and protected against penetration by precipitation running off the surface from the surrounding area. No requirements are imposed on areas of foil silos for round and square bales if silage is not removed from them.

4.2 It must be ensured that liquid manure, silage seepage and the precipitation contaminated with solid manure or ensiled material is collected in its entirety and disposed of as wastewater or recovered as waste in accordance with regulations provided it cannot be utilised in accordance with the Code of Good Practice for fertilisation.

5 Transitional provision concerning requirements pertaining to capacity

The respective provisions under Federal State law applicable until … [insert: the date of the day of the entry into force of this ordinance in accordance with § 74 sentence 2] shall apply to the capacity of facilities used to store liquid manure, slurry and solid manure.

6 Devices for drawing off

6.1 Any party filling or draining a liquid manure and slurry installation or silage seepage facility must

a) monitor this procedure and be assured that the safety devices required to this end are in proper working order prior to work starting, and

b) ensure that the permissible load limits of the facility and the safety devices are observed during filling and draining.

6.2 It must be ensured that the precipitation contaminated with substances that are generally hazardous to water during drawing off is collected in its entirety and disposed of as wastewater or recovered as waste in accordance with regulations provided it cannot be utilised in accordance with the Code of Good Practice for fertilisation.

7 Obligations incumbent upon the operator in terms of notification and monitoring

7.1 If a facility for storing silage seepage with a volume in excess of 25 m^3, an alternative liquid manure and slurry installation or silage seepage facility with a total volume in excess of 500 m^3, or a facility for storing solid manure or silage with a volume in excess of 1 000 m^3 is erected, decommissioned or substantially modified, the

operator must notify the competent authority of this in writing at least 6 weeks in advance. Sentence 1 shall not apply to the erection of facilities which require approval in a given case in accordance with other legislation, or which have obtained this, if, as a result of the approval, fulfilment of the requirements laid down in this ordinance is also guaranteed.

7.2 The operator must monitor the proper operation and imperviousness of the facilities, as well as the functionality of the safety devices, at regular intervals. Should the monitoring as per sentence 1 arouse suspicion of a leak, the operator must immediately take the measures necessary to prevent the substances from escaping. If it is suspected that a not insignificant quantity of substances that are hazardous to water have already escaped and it cannot be ruled out that this may endanger a body of water, he must inform the competent authority forthwith.

7.3 If the suspicion of a leak is corroborated, or should substances that are hazardous to water escape, the operator must take damage control measures immediately and arrange for a repair to be carried out by a specialist company if the operator himself is not a specialist company.

7.4 Operators must make arrangements for facilities that are subject to notification in accordance with point 7.1, including the piping, to be inspected by an expert, prior to commissioning and on the instructions of the competent authority, in terms of their imperviousness and functionality. Operators shall arrange for an expert to inspect ground basins every 5 years (30 months in water protection areas).

7.5 The expert must submit an inspection report to the competent authority on the outcome of each inspection conducted in accordance with point 7.4 within 4 weeks of the date of the inspection. He shall classify the facility based on the outcome of the inspections into one of the following classes:

1. free from defects,
2. with minor defects,
3. with significant defects, or
4. with hazardous defects.

The expert shall inform the competent authority of any hazardous defects forthwith.

7.6 The inspection report as per point 7.5 must contain information on the following:

a) the operator,
b) the location,
c) the identification of the facility,
d) the classification of the facility,
e) official approvals,
f) the expert and the expert organisation which appointed him,
g) the nature and scope of the inspection,
h) on whether the inspection of the facility as a whole has been concluded or which parts of the facility have not yet been inspected,
i) the nature and extent of any defects identified,
k) the date and outcome of the inspection, and
l) on the measures necessary and on a proposal for an appropriate deadline for implementing them.

7.7 In the case of minor defects identified during inspections in accordance with

point 7.4, the operator must remedy these within 6 months of them being detected and, if necessary in accordance with point 2.4, utilise a specialist company as per § 63. Significant and hazardous defects must be eliminated by the operator forthwith, however. The remedying of significant defects requires a repeat examination by an expert. If the expert detects a hazardous defect, the operator must shut down the facility straight away and, if this is deemed necessary on the basis of an assessment by the expert, drain it. The facility may only be put back into operation if the competent authority is in receipt of confirmation from the expert that the defects have been remedied successfully.

8. Existing facilities

8.1 In the case of facilities already established on … [insert: the date this ordinance enters into force in accordance with § 74 sentence 2] (existing facilities), the following shall apply from this date:

a) § 25(1) and (2), points 5, 6.1 and 7, and

b) points 1 to 4 and 6.2 if they contain specifications which comply with the requirements which had to be observed in accordance with the respective provisions under Federal State law on ... [insert: the date of the day of the entry into force of this ordinance in accordance with § 74 sentence 2].

8.2 In the case of existing facilities which do not comply with the requirements under points 2 to 4 and 6.2, the competent authority may order technical or organisational adaptation measures to be carried out

1. by means of which these deviations are rectified,
2. which are envisaged for these deviations in technical rules relating to existing facilities, or
3. by means of which equivalence to the requirements described in points 2 to 4 and 6.2 is achieved.

The requirements laid down in § 62(1) of the Water Resources Act must be observed in the instances under sentence 1 points 2 and 3.

8.3 In the case of existing facilities which are subject to inspection in accordance with point 7.4 and where retrofitting with a leak detection system is not feasible on technical grounds or can only be achieved at a disproportionately high cost, proof of the imperviousness of the facility must be furnished in the form of suitable technical and organisational measures.

8.4 In the orders as per point 8.2, the authority can neither demand that the facility be shut down or removed, nor can it stipulate adaptation measures which are tantamount to rebuilding the facility or which alter its purpose. The requirements laid down in this ordinance must be observed when remedying significant or hazardous defects in a liquid manure and slurry or silage seepage container. Otherwise, § 69(7) shall apply accordingly to existing facilities.

8.5 Existing facilities which are subject to inspection in accordance with point 7.4, but which were not subject to inspection based on the provisions under Federal State law prior to ... [insert: the date this ordinance enters into force in accordance with § 74 sentence 2] must be inspected by an expert within the following periods of time:

1. Facilities which were commissioned prior to 1 January 1971 must be inspected by ... [insert: the day and month of the entry into force of this

ordinance as per § 74 sentence 2 and the year of the fourth year following its entry into force],
2. facilities which were commissioned in the period from 1 January 1971 to 31 December 1981 must be inspected by ... [insert: the day and month of the entry into force of this ordinance as per § 74 sentence 2 and the year of the sixth year following its entry into force],
3. facilities which were commissioned in the period from 1 January 1982 to 31 December 1991 must be inspected by ... [insert: the day and month of the entry into force of this ordinance as per § 74 sentence 2 and the year of the eighth year following its entry into force],
4. facilities which were commissioned in the period from 1 January 1992 to 31 December 2001 must be inspected by ... [insert: the day and month of the entry into force of this ordinance as per § 74 sentence 2 and the year of the 10th year following its entry into force],
5. facilities which were commissioned after 31 December 2001 must be inspected by ... [insert: the day and month of the entry into force of this ordinance as per § 74 sentence 2 and the year of the 12th year following its entry into force].

The order as per point 7.4 shall not be affected.

9 Requirements in special areas

9.1 Liquid manure and slurry installations or silage seepage facilities may not be erected and operated within the coverage area and the narrower zone of protected areas. Single-walled liquid manure and slurry installations or silage seepage facilities for storing liquid substances that are generally hazardous to water may only be erected and operated with a leak detection system in the broader zone of protected areas.

9.2 Liquid manure and slurry installations or silage seepage facilities may only be erected and operated in defined and provisionally secured flood plains if

a) they do not float or may otherwise be damaged by flood waters, and
b) substances that are hazardous to water are not washed away by flood waters, not released and are unable to reach a body of water in another way.

9.3 The competent authority may issue an exemption from the requirements pursuant to points 9.1 and 9.2 if

a) the public good requires doing so or a ban would result in unreasonable hardships, and
b) if the protective purpose of the protected area is not impaired.

9.4 More extensive provisions under Federal State ordinances on defining protected areas shall not be affected.

Explanatory statement

[relating to the Ordinance on facilities for handling substances that are hazardous to water

A. General Part

I. Objective and necessity

As a result of the amendment to the Basic Law of 1 September 2006, the area of “Water resources management” also became part of the concurrent legislation (Article 74(1) point 32 of the Basic Law). This area can now be regulated fully at Federal Government level. The Act revising the water law (Water Resources Act) of 31 July 2009 (Federal Law Gazette I, p. 2585) fulfils this new competence and establishes at the same time the basis for corresponding specific Federal Government regulations at ordinance level. A fundamental regulation on this new basis, significant for both business and administration, is the law on handling substances that are hazardous to water. The Ordinance on facilities for handling substances that are hazardous to water sets out in concrete terms the corresponding legal stipulation of the new Water Resources Act (§§ 62 and 63). It mainly includes substance- and facility-related provisions from which Federal State law may not deviate (Article 72(3) sentence 1 point 5 of the Basic Law).

The ordinance is to supersede the previous Federal State ordinances on facilities for handling substances that are hazardous to water which have been enacted on the basis of the Model administrative instruction concerning substances which are hazardous to water from the Working Group of the Federal States on water issued on 8/9 November 1990 (as updated on: 22/23 March 2001; Model administrative instruction concerning substances that are hazardous to water). This brings about harmonisation of the law on facilities concerned with protecting bodies of water, which has long since been requested, above all, by the businesses affected, after the law developed differently in the Federal States over time on certain points. The ordinance adopts provisions which have already been introduced and proven successful in at least several Federal States. For a few Federal States, this may necessarily entail new or amended stipulations.

The ordinance also standardises the procedure for classifying substances that are hazardous to water, including the facility operator's self-classification obligation which is associated with this. It supersedes the corresponding provisions in the administrative provision concerning substances which are hazardous to water of 17 May 1999, enacted on the basis of § 19g(5) sentence 2 of the previous version of the Water Resources Act (Federal Gazette No. 98a of 29 May 1999), which has been amended by the general administrative provision amending the administrative provision concerning substances which are hazardous to water of 27 July 2005 (Federal Gazette No. 142a of 30 July 2005) and develops them further.

Finally, the ordinance also serves to transpose the provisions contained in Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (Water Framework Directive) to protect bodies of water from the release of pollutants from technical facilities and the consequences of unforeseen pollution.

II. Key provisions

The ordinance contains substance- and facility-related provisions for handling substances that are hazardous to water, as well as provisions relating to expert organisations, quality control and monitoring bodies, and specialist companies.

The ordinance shall only apply to facilities which handle substances that are hazardous to water. In § 1, facilities that are not fixed nor used in a stationary manner, facilities where the volume of substances that are hazardous to water which are handled in the facility is negligible compared with other substances, those facilities where substances that are hazardous to water are stored underground, as well as liquid manure and slurry installations or silage seepage facilities, are exempt. Also exempt from the ordinance are aboveground facilities outside protected areas and flood plains with a volume of up to 220 litres or a mass of up to 200 kilograms. The latter shall still be subject to the "duty of care" principle (§ 62(1) of the Water Resources Act).

1. Classification of substances and mixtures into a water hazard class or as non-hazardous to water (Chapter 2)
Similar to the stipulations in the previous administrative provision concerning substances which are hazardous to water, the operator of a facility shall assess, in principle, all substances and mixtures handled in his facility also on the basis of the data to be ascertained within the framework of European substance and chemicals legislation and assign them to one of three water hazard classes or classify them as non-hazardous to water (self-classification, § 4(1) and § 8(1)).
A facility operator's self-classification obligation and the main bases for classification (§ 4(1) or § 8(1) and § 10) are enshrined in a normative manner by means of this ordinance. The bases for classification are specified and completed by means of Appendix 1, which stipulates the decisive criteria.

The water hazard classes established by means of substance self-classification are reviewed by the Federal Environment Agency. For this purpose, the Federal Environment Agency checks the documentation to be submitted by the operator for completeness and plausibility (§ 5(1) sentence 1). As is demonstrated by the previous experience of self-classification, it is necessary to establish a quality assurance system. To this end, the Federal Environment Agency selects documentation on a random basis and reviews it by reference to its own sources and findings. On the basis of the outcome of the review and its own findings and assessments, the Federal Environment Agency shall decide on the final classification (§ 6(1) and (2)), announce this to the operator, and publish the decision in the Federal Gazette and on the internet (§ 6(3) and (4)).

In the case of liquid and gaseous mixtures, the operator shall present documentation regarding his classification to the competent Federal State authority (§ 8(3)), which can likewise check the self-classification. For this purpose, it may seek the advice of the Federal Environment Agency (§ 9(2)). Solid mixtures are basically regarded as generally hazardous to water, but may be classified differently by the operator (§ 10(1) and (2)).

The retention of the classification of substances and mixtures in water hazard classes makes it possible to rank the safety of the facilities with respect to the hazard potential of the facility and its spatial assignment (e.g. in protected areas) through differentiation of monitoring requirements and logistical measures. At the same time, there is an ongoing incentive to improve knowledge of the substance data relating to the bodies of water and, hence, to make a contribution to the replacement of hazardous substances with those less hazardous to bodies of water.

2. **Requirements for facilities handling substances that are hazardous to water; obligations incumbent upon the operator of the facility (Chapter 3)**
All facilities handling substances that are hazardous to water must be precisely defined, isolated from others (§ 14) and must observe certain basic requirements (§ 17). The containers and pipelines in which the substances that are hazardous to water are to be found must be designed with respect to their material and construction in such a way that the escape of substances that are hazardous to water is prevented under all operating conditions. If a leak should nevertheless occur, it must be possible to discern from where the

substances that are hazardous to water are escaping without the need for additional equipment. The substances that are hazardous to water which have escaped, as well as any substances which may be contaminated with the same in the event of accidents, must then be retained and supplied for safe disposal. §§ 27 to 39, which take priority over the general provisions in § 18, contain special support rules for certain facilities. If pipelines or wastewater facilities are to be incorporated into a facility, the special requirements follow from § 21 and § 22.

In addition, for all facilities, it is the case that the operator must observe particular safety regulations during filling and draining (§ 24) and must announce and take corrective action in the event of operational malfunctions where substances that are hazardous to water escape in not insignificant quantities (§ 25).

In order to be able to differentiate between the requirements, the facilities are classified, depending on the water hazard class and the volume or mass, into four hazard levels (§ 40). Both the obligation to notify (§ 41) and the obligation relating to the determination of suitability (§ 42) are primarily determined by these hazard levels. Safe operation of a facility also includes the fact that the operator has operating instructions available (§ 45), that the facility is constructed and maintained by specialist companies (§ 46), and the fact that an independent expert verifies by means of an inspection that the facility is in proper working order (§ 47). The obligations increase in this regard as the hazard level rises.

In order to fulfil the special need to protect in water protection areas and flood plains, §§ 50 and 51 contain specific restrictions which reduce the risk in these areas.

3. Expert organisations, quality control and monitoring bodies, specialist companies (Chapter 4)
Both the expert organisations, whose primary task is to inspect the facilities and to certify and monitor the specialist companies, and the quality control and monitoring bodies, whose sole task is to certify and monitor specialist companies, require approval which is valid across the entire country (§§ 53 and 58). This is designed to ensure that these tasks, which are important for the safe operation of a facility, are only undertaken by personnel who especially have the corresponding expertise and experience. The organisations are obliged to continue to train their personnel on an ongoing basis and to assess the experiences acquired in the course of their work (§§ 56 and 61). If they fail to fulfil their obligations, their approval can be revoked. The requirements pertaining to specialist companies which carry out work on a facility are regulated by § 63(2). In order that an operator can also commission specialist companies in a targeted manner, the expert organisations and the quality control and monitoring bodies must publish a list of the specialist companies recognised by them (§ 62(3)). The specialist company must furnish the operator on site with proof of its status as a specialist company without being requested to do so.

4. Concluding provisions (Chapter 5)
Finally, the ordinance contains transitional provisions for existing classifications of substances and mixtures (§§ 67 and 68), existing facilities (§§ 69 to 71) and for expert organisations and specialist companies (§ 73).

III. Compatibility with EC law

The provisions in the ordinance also serve to transpose binding stipulations under EU water legislation. In accordance with Article 11(3l) of the Water Framework Directive, Member States are obliged to take “any measures required to prevent significant losses of pollutants from technical installations, and to prevent and/or to reduce the impact of accidental pollution incidents, for example as a result of floods, including through systems to detect or give warning of such events including, in the case of accidents which could not reasonably have been foreseen, all appropriate measures to reduce the risk to aquatic ecosystems.” The

ordinance is also compatible with other EU law.

IV. Alternatives

There are no alternatives to the ordinance. There is a general environmental and legal policy requirement to complement, including at a subordinate level, the regulatory powers of the Federal Government in the water sector which have been expanded by means of the federalism reform of 2006, so as to bring about national requirements for facilities handling substances that are hazardous to water and thereby overcome the current legal fragmentation.

V. Impact on male/female equality

The impact of the draft ordinance in terms of equal opportunities policy was reviewed pursuant to § 2 of the Federal Equal Opportunities Act and the guidelines drawn up in this regard. If individuals are affected by the provisions of the ordinance, they shall affect men and women equally. The outcome of the relevance test as regards equality issues is therefore negative.

VI. Time limitation

No time limit shall be applied to the ordinance since national regulations concerning facilities which handle substances that are hazardous to water are necessary in the long run and are also indispensable under EU law.

VII. Costs and financial implications of the draft ordinance

1. Costs for the budgets of public authorities

The Ordinance on facilities for handling substances that are hazardous to water sets out in detail and standardises the obligations which essentially already exist at national, Federal State and municipal level regarding the protection of bodies of water when handling substances that are hazardous to water. These obligations have already been prescribed by the Water Resources Act and water legislation in the Federal States. The already existing obligation regarding self-classification by the operator of the facility of substances that are hazardous to water which are handled in facilities is set out in detail and adapted in line with interim developments in European and international substance and chemicals legislation. Previous technical and organisational stipulations in the Federal States in relation to facilities for handling substances that are hazardous to water, which differ in part in a few respects, are superseded and standardised by regulations under Federal law.

The overall cost position for the public purse is as follows:
As a result of the obligation incumbent upon the Federal Environment Agency to review the classification of substances that are hazardous to water, and especially as a result of the decisions regarding the classification of substances that are hazardous to water which can be verified under administrative law, additional enforcement costs amounting to EUR 52 500 per year shall be incurred by the Federal Government within the applicable budgetary and financial plans.
The preparation of technical regulations and the commissioning of reports to clarify specific issues in the field of substances that are hazardous to water has so far resulted in annual costs in the order of EUR 20 000-50 000 for the technical regulations and EUR 30 000 for reports. The scale of these expenses will not change as a result of the ordinance.
With the enactment of this ordinance, construction products and designs for facilities for storing and drawing off fermentation substrates of agricultural origin, in due consideration of the requirements under water legislation, are also approved by the German Structural Engineering Institute on the basis of the Federal State ordinances for determining the

suitability under water legislation of construction products and designs as per the respective Federal State building regulations [German designation: WasBauPVO]. The biogas facilities were previously assessed by the competent authorities on a case-by-case basis. The drafting of the inspection requirements and the assessment principles on the basis of the national stipulations, as well as the preparation of proofs of usability from the building inspectorate in relation to these facilities, shall entail costs amounting to EUR 250 000 per year for the German Structural Engineering Institute and, consequently, for the Federal States financing this institute. At the same time, the German Structural Engineering Institute is anticipating fee revenues of approximately EUR 40 000. On the other hand, the Federal States shall benefit from an easing of the burden in terms of enforcement, which will at least be on the same scale, since duplication can be avoided.

2. Costs to businesses, impact on prices
Businesses shall incur additional costs in exceptional cases as a result of the provisions of the draft ordinance if they satisfy the regulations under Federal State law. These can arise, for instance, from the hazard assessments for pipelines or for certain facilities which handle gaseous substances (cf. §§ 21 and 39). Since biogas facilities were not regulated in the previous ordinances, a refitting requirement in the region of EUR 12 million per year shall arise if these facilities are actually operated without the safety devices now required. For new facilities, additional costs of around EUR 5.7 million per year shall arise compared with the unregulated situation. However, the requirements of this ordinance correspond to the level usually achieved nowadays, meaning that these additional costs shall not be incurred.

As a result of the ordinance, the more stringent requirements based on the national level shall apply in those Federal States which have set lower requirements, in deviation from the Model administrative instruction concerning substances that are hazardous to water. However, this also prevents competitive distortions. The draft ordinance does not, however, include an obligation to adapt existing facilities unconditionally to the technical safety level laid down in this ordinance. Corresponding measures are subject to a proportionality assessment by the authorities. There are, however, no meaningful statistics available on the need to adapt existing facilities. No effects on price levels, particularly consumer price levels, are anticipated.

VIII. Bureaucratic costs

1. Companies
The Ordinance on facilities for handling substances that are hazardous to water contains the following obligations to provide information on the part of companies:

- the self-classification of substances that are hazardous to water (§ 4 and § 8), if this substance or mixture has not yet been classified,
- objection proceedings (from § 6(3)),
- any deviating classification of a solid mixture (§ 10), if the operator has his own reasons for doing this,
- documenting the demarcation of facilities (§ 14(1)),
- the obligation to disclose, where substances that are hazardous to water escape in not insignificant quantities, including the obligation to notify water utility and sewage treatment plant operators if applicable (§ 25),
- the obligation to disclose in the case of facilities with increased risk which have been constructed or substantially modified (§ 41 or Appendix 7 point 7.1),
- the documentation relating to the facility (§ 44(1)), as well as keeping this documentation available (§ 44(2)),
- the operational instructions or, alternatively, the instruction sheet (§ 45(1) or (4)),
- the transmission of the inspection reports to the authority (§ 48(3)),
- the affixing of the inspection sticker (§ 48(4)),
- the waiver of requirements in protected areas and flood plains (§ 50(4) or § 51(2) or Appendix 7 point 9.3),

- the application for approval as an expert organisation (§ 53(1) or as a quality control and monitoring body (§ 58(1)),
- the appointment record, notification of the appointment (§ 56 point 2 and § 61(1) point 2) and appointment letters (§ 54(1) sentence 3 or § 59(1) sentence 5 and § 54(7) and § 59(3)),
- the annual reports and the evaluation contained therein (§ 56 point 6 or § 61(1) sentence 1 point 3),
- the inspection log (§ 57(1)),
- the certification document for specialist companies (§ 63(3)),
- the announcement of the certified specialist companies (§ 62(3)),
- communication regarding the change in organisational structure of a specialist company (§ 64(2)).

With the exception of the inspection sticker and the announcement of the certified specialist companies, these obligations to provide information were already essentially regulated hitherto in a similar form under Federal State law and are not new for the companies concerned. The cost of affixing the inspection sticker is decidedly low, since the expert is already on site and simply has to affix the sticker. The cost of placing a list on the internet is also negligible, since every organisation previously also had to maintain a list of who has approved and reviewed it and the time expended in uploading such a list is of no consequence. All in all, previous differing technical and organisational stipulations in the Federal States as regards the handling of substances that are hazardous to water are superseded and standardised by regulations under Federal law. Particularly in the case of enterprises, expert organisations and specialist companies which operate across Federal State borders, this shall ease the burden. The facilities' register, which is still included in the Model administrative instruction concerning substances that are hazardous to water in the Federal States, but which no longer has to be completed in every case, has been dispensed with in its entirety.
As regards the bureaucratic costs incurred, reference is also made to the explanatory statement to the Water Resources Act.

2. Citizens
The Ordinance on facilities for handling substances that are hazardous to water only includes obligations to provide citizens with information with respect to fuel oil consumer installations. Examples in this regard include the obligation to disclose in relation to the construction or significant modification of fuel oil consumer installations with a capacity in excess of 1 m^3 (§ 41(1)), the obligation to report the leaking of fuel oil from the facility (§ 25(2)) and the obligation to keep documentation relating to the facility available (§ 44(1)) and to affix an instruction sheet (§ 45(4)). These obligations correspond to the previous Federal State regulations.

3. Administration
The Ordinance on facilities for handling substances that are hazardous to water includes the obligation incumbent upon the Federal Environment Agency to publish classified substances that are hazardous to water (§ 6(4)). This was previously undertaken in the context of an administrative provision following the consent of the *Bundesrat*. The procedural operation is simplified, meaning that there is no significant change here.

Summary of the compliance costs

Basic preliminary remark:
The Federal Government Ordinance on facilities for handling substances that are hazardous to water supersedes the previous Federal State ordinances. In the Working Group of the Federal States on water, the Federal States agreed on a Model administrative instruction concerning substances which are hazardous to water which was transposed into Federal State law by the states with more or fewer minor variations. As a result, with many of the stipulations identified, no additional compliance costs shall accrue (neither an increase nor a reduction in compliance costs), since the provisions also already existed previously for businesses and administration. Additional / reduced expenditure shall only arise where there are also changes in terms of content as regards the legal stipulations compared with current Federal State law.
In some cases, individual Federal States have deviated from the model to a certain extent when enacting the respective ordinances. With the exception of the ordinances in Berlin and North Rhine-Westphalia, the differences are generally just a matter of detail. These two Federal States have mostly dispensed with the classification of substances and mixtures that are hazardous to water. This abandonment also had consequences in terms of technical and organisational measures. Since the water hazard classes under the new ordinance shall also again apply to these Federal States, particular compliance costs shall lie ahead for both these Federal States with respect to the classification of the substances that are hazardous to water and the measures dependent on this classification. North Rhine-Westphalia has also introduced several special provisions including, for example, the fact that a full retention volume is dispensed with in the case of hazard level D facilities.

The following depiction of the compliance costs by way of the "original state" relates to the Model administrative instruction concerning substances which are hazardous to water from the Working Group of the Federal States on water and, with regard to the classification of substances that are hazardous to water, to the administrative provision concerning substances which are hazardous to water of 17 May 1999 (Federal Gazette No. 98a of 29 May 1999), which has been amended by the General administrative provision amending the administrative provision concerning substances which are hazardous to water of 27 July 2005 (Federal Gazette No. 142a of 30 July 2005). A complete overview of the differences in relation to the respective Federal State ordinances would already be beyond the scope of an assessment of the compliance costs. The imprecision associated with this must be accepted in this respect. If significantly different regulations existed in certain Federal States (in particular Berlin and North Rhine-Westphalia), mention is made of this anomaly in the text but without presenting this in the form of varying compliance costs.

All in all, the depiction of the compliance costs is proving to be very complicated. As regards the issues in this regard, the data from the German Federal Statistical Office is generally of little significance. In many cases, the businesses involved and the Federal States are unable to supply any substantiated data, meaning that many assertions are based on rough estimates which depend solely on the experiences and estimates of the persons concerned.
The responsibility for enforcement is not changed as a result of the Ordinance on facilities for handling substances that are hazardous to water. Generally speaking, as regards the implementation tasks under the Ordinance on facilities for handling substances that are hazardous to water, the Federal State authorities appointed by the respective states are responsible. This shall also apply to the approval of the expert organisations and the quality control and monitoring bodies. By contrast, substances and groups of substances are classified by the Federal Environment Agency. The Federal Railway Office is the supervisory and approval authority responsible for Federal railways. Hence, responsibility for the implementation tasks arising from the Ordinance on facilities for handling substances that are hazardous to water in relation to Federal railway facilities rests with the Federal Environment Agency. These tasks include, *inter alia*, loading and unloading facilities, including loading

points, where substances that are hazardous to water are handled, but also filling stations for rolling stock, waste oil transfer points, fuel oil consumer installations in railway stations and signal boxes, as well as stand-by units and hydraulic lift installations in the Federal railway facilities. By means of the Ordinance on facilities for handling substances that are hazardous to water, tasks incumbent upon the Federal Government are specified in this sphere of competence. While the burden incumbent upon the administration is unchanged, this partly involves a transfer of tasks from the Federal State administration to the national administration. To sum up, it is not anticipated that compliance costs will change.

As a result of the Ordinance on facilities for handling substances that are hazardous to water, the following changes to the compliance costs arise, by and large, in accordance with the following table:

Additional costs, Federal administration (Federal Environment Agency)	
(Nos. 6, 9, 11, 12, 15, 31)	EUR 54 000 per year
One-off Federal administration costs (Federal Environment Agency)	
(No. 132)	EUR 925
Additional costs, Federal State administrations	
(Nos. 36, 107, 111, 139)	EUR 457 150 per year
Additional recurring costs, businesses	
(Nos. 10, 14, 36, 44, 50, 84, 85, 106, 109, 110, 114-120, 122, 123, 125-129, 137, 141)	EUR 33.9 million per year
of which in relation to obligations to provide information	
(Nos. 14, 84, 106, 114, 115, 120, 123, 125, 126, 127, 129, 138)	EUR 6.05 million per year
One-off costs, businesses	
(Nos. 44, 62, 75, 134)	EUR 73.7 million
of which biogas facility refitting	EUR 64.3 million
Savings to businesses	
(No. 17)	- EUR 196 000 per year

All in all, the database for specifying compliance costs is highly unsatisfactory; the costs and savings indicated are therefore largely based on estimates. The total amounts relate to different sectors and entirely different circumstances. The significance is limited in this respect.

In approximately 3 years therefore, it is the intention to discuss with the Federal States, operators and experts the experience acquired as a result of the new ordinance, what effects have developed as a result – if there is dependable data in this regard, the level of acceptance of the regulations and whether the ordinance shall need to be improved as a result.

E 1 Compliance costs for citizens

E 2 Compliance costs for business
of which bureaucratic costs arising from obligations to provide information

E 3 Administrative compliance costs
Federal Government (Federal Government administration)
Federal States, including municipalities (Federal State administration)

A: Number of cases per year
K: Costs per case
E: Compliance costs per year

Item no	Provision	Stipulation	Party to whom standard is addressed	**Additional** compliance costs compared with the Federal State regulations
1	§ 4(1)	Self-classification of substances by operators	Businesses, obligation to provide information	No change in burden
2	§ 4(3)	Documenting self-classification and transmission to the Federal Environment Agency	Businesses, obligation to provide information	No change in burden
3	§ 4(4)	Proposal for a different classification by the operator	Businesses, obligation to provide information	No change in burden
4	§ 5(1)	Review of the self-classification of substances by the Federal Environment Agency	Federal Government administration	No change in burden
5	§ 5(1)	Subsequent delivery of documentation – included in points 1 and 2	Businesses	No change in burden
6	§ 5(2)	Spot check of the documentation by the Federal Environment Agency	Federal Government administration	A: 25 K: EUR 925/case E: EUR 23 000/annum
7	§ 5(3)	Pooling of substances into substance groups by the Federal Environment Agency	Federal Government administration	No change in burden
8	§ 6(1)	Federal Environment Agency decision regarding substance classification	Federal Government administration	No change in burden
9	§ 6(3)	Notification of the decision to the operator	Federal Government administration	A: 250 K: EUR 17.85/case E: EUR 4 700/annum

10		Objection proceedings	Businesses	A: 20 cases/annum K: EUR 980/case E: EUR 19 600/annum
11		Objection proceedings	Federal Government administration	A: 20 cases/annum K: EUR 925/case E: EUR 18 500/annum
12	§ 6(4)	Publication of the decision	Federal Government administration	A: 6 K: EUR 150/case E: EUR 900/annum
13	§ 7(1)	Reassessment and, if necessary, change in the classification of substances and publication	Federal Government administration	No change in burden
14		Objection proceedings	Businesses, obligation to provide information	A: 5 cases/annum K: EUR 980/case E: EUR 4 900/annum
15		Objection proceedings	Federal Government administration	A: 5 cases/annum K: EUR 925/case E: EUR 4 600/annum
16	§ 7(2)	Communication from the operator to the Federal Environment Agency concerning information regarding a change in substance classification	Businesses, obligation to provide information	No change in burden
17	§ 8(1) and (3)	Self-classification of mixtures by operators and documentation	Businesses	No change in the burden; in the case of solid mixtures: A: 400 K: EUR 490/case E: -EUR 196 000/annum
18	§ 8(3)	Submission to the competent authority within the framework of approval or on request	Businesses	No change in burden
19	§ 8(4)	Granting inspection of the self-classification for preserving trade secrets	Businesses	0
20	§ 8(4)	Inspection of the documentation relating to self-classification by the competent authority	Federal State administration	0
21	§ 9(1)	Subsequent delivery of documentation	Businesses	No change in burden
22	§ 9(1)	Review of the self-classification by the competent authority and, if applicable, a different classification	Federal State administration	No change in burden
23	§ 9(2)	Advice given to the	Federal	No change in burden

		competent authority by the Federal Environment Agency on request	Government administration	
24	§ 10(1)	Classification of a solid mixture as non-hazardous to water	Businesses	No change in burden, alleviation
25	§ 10(2)	Classification of a solid mixture into a water hazard class	Businesses	No change in burden
26	§ 10(3)	Documenting of the classification of a solid mixture by the operator	Businesses	No change in burden
27	§ 10(3)	Submission of the documentation to the competent authority within the framework of approval or on request	Businesses	No change in burden
28	§ 10(3)	Review of the documentation	Federal State administration	No change in burden
29	§ 10(4)	Change in the classification of a solid mixture	Federal State administration	No change in burden
30	§ 10(4)	Determining a solid mixture as generally hazardous to water and the announcement thereof	Federal State administration	No change in burden
31	§ 11	Classification of a mixture by the Federal Environment Agency	Federal Government administration	A: 5 K: EUR 460/case E: EUR2 300/annum
32	§ 12(1)	Establishment of a Commission for the evaluation of substances that are hazardous to water at the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety	Federal Government administration	No change in burden
33	§ 14(1)	Determination and demarcation of facilities by the operator	Businesses	No change in burden
34	§ 16(1)	Differing requirement	Federal State administration	No change in burden
35	§ 16(2)	Arrangement of the monitoring of bodies of water	Federal State administration	No change in burden
36	§ 16(3)	Approval of exemptions	Businesses Federal State administration	A: 1 000 Costs per case, businesses: EUR 430/case

				Compliance costs per year, businesses: EUR 428 000 Costs per case, Federal State administration: EUR 410/case Compliance costs per year, Federal State administration: EUR 407 000
37	§ 17(1) to (3)	Basic requirements pertaining to facilities	Businesses	No change in burden
38	§ 17(4)	Requirements in terms of the decommissioning of a facility	Businesses	No change in burden
39	§ 18(1) to (3)	Requirement in terms of the retention of substances that are hazardous to water	Businesses	Essentially: Any change in the financial burden for particular small facilities (paragraph 3 sentence 2) cannot be quantified
40	§ 18(4)	Full retention volume in the case of hazard level D	Businesses	No change in the financial burden
41	§ 19(1)	Inspection of drains	Businesses	No change in the financial burden
42	§ 19(6)	Decision regarding the retention and disposal of precipitation	Federal State administration	No change in the financial burden
43	§ 20	Requirement in terms of retention in the event of fire	Businesses	No change in the financial burden
44	§ 21(1)	Risk assessment for pipelines	Businesses	One-off A: 350 cases K: EUR 2 000/case E: EUR 700 000 in total At regular intervals: A: 7 cases per year K: EUR 2 000/case E: EUR 14 000/annum
45	§ 21(2) points 2 and 3	Inspection of monitoring devices in underground pipelines	Businesses	No change in the financial burden
46	§ 22(3)	Special operating instructions when using wastewater facilities as a retention system	Businesses	No change in the financial burden
47	§ 24(1)	Monitoring the filling or draining process	Businesses	No change in the financial burden
48	§ 25(1)	Action in the event of operational malfunctions	Businesses	No change in the financial burden
49	§ 25(2)	Indication of the escape of substances that are hazardous to water	Citizens, obligations to provide information Businesses,	No change in the financial burden

			obligations to provide information	
50	§ 25(3)	Repair programme	Citizens Businesses	A: 5 000 cases/annum K: EUR 2 000/case E: EUR 5 million/annum
51	§ 27(1)	Requirements pertaining to solid substances that are hazardous to water in containers or spaces	Businesses	No change in the financial burden
52	§ 27(2)	Requirements pertaining to solid substances that are hazardous to water when handled in the open	Businesses	No change in the financial burden
53	§ 28	Requirements for substances to which liquid substances that are hazardous to water adhere	Businesses	No change in the financial burden
54	§ 29(1)	Areas for handling liquid substances that are hazardous to water	Businesses	No change in the financial burden
55	§ 31	Loading and unloading ships	Businesses	No change in the financial burden
56	§ 312	Drum and container storage facilities	Businesses	No change in the financial burden
57	§ 33	Areas for drawing off in fuel oil consumer installations	Businesses	No change in the financial burden
58	§ 34	Areas for drawing off in certain manufacturing, treatment or usage facilities	Businesses	Savings, cannot be quantified in greater detail
59	§ 35	Emergency plans and action plans in the case of manufacturing, treatment or usage facilities in the energy supply sector	Businesses	No change in the financial burden
60	§ 36	Geothermal probes, solar collectors and cooling devices	Businesses	No change in the financial burden
61	§ 37	Oil and earth cables	Businesses	No change in the financial burden
62	§ 38	Biogas facilities with fermentation substrates of agricultural origin	Businesses	A: 350 K: EUR16 250 E: EUR4.3 million for 2012 and 2013 Refitting A: 5 700

				K: 10 500 E: EUR 60 million
63	§ 39(3)	Risk assessment for facilities with gaseous substances that are hazardous to water	Businesses	Cannot be quantified
64	§ 40(1)	Assignment to hazard levels	Citizens, obligations to provide information Businesses, obligations to provide information	No change in the financial burden
65	§ 41(1)	Obligation to disclose	Citizens, obligations to provide information Businesses, obligations to provide information Federal State administration	No change in the financial burden
66	§ 41(4)	Obligation to disclose following a change of operator	Businesses, obligations to provide information Federal State administration	No change in the financial burden
67	§ 42(2)	Ban on operation or stipulation of requirements	Federal State administration	No change in the financial burden
68	§ 43	Application for a determination of suitability	Citizens, obligations to provide information Businesses, obligations to provide information	No change in the financial burden
69	§ 44(1)	Documentation relating to the facility	Citizens, obligations to provide information Businesses, obligations to provide information	No change in the financial burden
70	§ 44(2)	Keeping inspection documentation available	Citizens, obligations to provide information Businesses, obligations to provide	No change in the financial burden

			information	
71	§ 44(3)	Submission of documents	Businesses, obligations to provide information	No change in the financial burden
72	§ 45(1)	Having the operating instructions available	Businesses, obligations to provide information	No change in the financial burden
73	§ 45(1)	Coordination of the contingency plan	Businesses, obligations to provide information Federal State administration	No change in the financial burden
74	§ 45(2)	Instruction and documentation regarding operating instructions	Businesses, obligations to provide information	No change in the financial burden
75	§ 45(4)	Affixing an instruction sheet	Citizens, obligations to provide information Businesses, obligations to provide information	No change in the financial burden For existing wastewater facilities, one-off costs A: 350 000 K: EUR 23.80/case E: EUR 8.3 million
76	§ 47(1)	Monitoring imperviousness	Citizens Businesses	No change in the financial burden
77	§ 47(1)	Arranging a monitoring agreement	Federal State administration	No change in the financial burden
78	§ 47(2)	Inspecting facilities outside protected areas	Citizens Businesses	No change in the financial burden
79	§ 47(3)	Inspecting facilities inside protected areas	Citizens Businesses	No change in the financial burden
80	§ 47(4)	Arranging an inspection	Federal State administration	No change in the financial burden
81	§ 47(5)	Inspection following the rectification of defects	Citizens Businesses	No change in the financial burden
82	§ 48(2)	Classification of the outcome of the inspections	Businesses	No change in the financial burden
83	§ 48(3)	Submission of inspection report	Businesses, obligations to provide information	No change in the financial burden
84	§ 48(4)	Inspection sticker	Businesses, obligations to provide information	A: 200 000 K: EUR 3.68/case E: EUR 724 000/annum
85	§ 48(5)	Handing over a new instruction sheet	Businesses	A: 200 000 E: EUR 2.72/case K: EUR 544 000/annum

86	§ 49(1)	Rectification of defects	Federal State administration	A: 40 000 K: E: cannot be quantified – see comment
87	§ 49(2)	Confirmation of the rectification of a defect	Businesses	No change in the financial burden
88	§ 49(2)	Taking a facility out of operation	Businesses	No change in the financial burden
89	§ 50(3)	Exemptions in protected areas	Federal State administration	No change in the financial burden
90	§ 51(2)	Exemptions in flood plains	Federal State administration	No change in the financial burden
91	§ 52	Proof of a deviating provision	Businesses	No change in the financial burden
92	§ 53(1) and (3)	Application for approval of an expert organisation, including documentation	Businesses, obligations to provide information	No change in the financial burden
93	§ 53(2) and (4)	Review of the equivalence of the approval	Federal State administration	Cannot be quantified
94	§ 53(2) and (4)	Approval of an expert organisation	Federal State administration	No change in the financial burden
95	§ 54(1)	Appointment of experts and the handing over of an appointment letter	Businesses	No change in the financial burden
96	§ 54(4)	Different appointment	Businesses	No change in the financial burden
97	§ 55(1)	Revocation of an approval	Federal State administration	No change in the financial burden
98	§ 56 points 1, 7 and 10	Notification of the annulment of the appointment of an expert, a change in the authorised representative, or the dissolution of the expert organisation	Businesses, obligations to provide information	No change in the financial burden
99	§ 56 point 2	Notification of the appointment of an expert, a change in or expiry of, an appointment	Businesses, obligations to provide information	No change in the financial burden
100	§ 56 point 3	Scrutiny of inspections	Businesses	No change in the financial burden
101	§ 56 point 4	Exchange of knowledge	Businesses	No change in the financial burden
102	§ 56 point 5	External exchange of experiences	Businesses	No change in the financial burden
103	§ 56 point 6	Annual report	Businesses, obligations to provide information	No change in the financial burden
104	§ 56 point 8	Participation in further	Businesses	No change in the financial

		training		burden
105	§ 57(1)	Maintaining an inspection log and presentation on request	Businesses, obligations to provide information	No change in the financial burden
106	§ 58(1) and (3)	Application for approval of a quality control and monitoring body (GÜG), including documentation	Businesses, obligations to provide information	A: 12 K: EUR 2 100/case E: EUR 26 000
107	§ 58(3)	Approval of a quality control and monitoring body	Federal State administration	A: 12 K: EUR 2 000/case E: EUR 24 000
108	§ 58(2) and (4)	Review of the equivalence of the approval	Federal State administration	No entry possible
109	§ 59(1)	Appointment of a specialist assessor	Businesses	A: 12 x 27 K: EUR 210/specialist assessor E: EUR 68 000/annum
110	§ 59(2)	Different appointment	Businesses	A: 5 K: EUR 19/case E: EUR 95/annum
111		dto.	Federal State administration	A: 5 K: EUR 75/case E: EUR 375/annum
112	§ 60(1)	Withdrawal of the approval	Federal State administration	Negligible
113	§ 61(1) point 2	Annulment of the appointment of a specialist assessor	Businesses, obligations to provide information	Cannot be quantified
114	§ 61(1) point 2	Notification of the appointment, a change in or expiry of, the appointment of a specialist assessor	Businesses, obligations to provide information	A: 300 K: EUR 38.10/case E: EUR 1 150
115	§ 61(1) point 3	Annual report	Businesses, obligations to provide information	A: 12 K: EUR 420 E: EUR 5 000/annum
116	§ 61(1) point 5	Participation in further training events	Businesses	A: 300 K: EUR 970/person E: EUR 97 000/annum
117	§ 61(1) point 6	Exchange of knowledge	Businesses	A: 12x25 K: EUR 420/person E: EUR 126 000/annum
118	§ 61(1) point 7	External exchange of experiences	Businesses	A: 12 K: EUR 670/person E: EUR 8 000/annum
119	§ 62(1) point 1	Monitoring and scrutiny of the specialist companies	Businesses	A: 1 500 K: EUR 210/case E: EUR 300 000/annum
120	§ 62(1) point 2	Evaluation of the findings	Businesses, obligations to	A: 12 K: EUR 420/organisation

			provide information	E: EUR 5 000/annum
121	§ 62(1) point 3	Annual report	Businesses, obligations to provide information	included in 120
122	§ 62(2)	Training opportunities	Businesses	A: 400 K: EUR 1 500 per training course E: EUR 600 000/annum
123	§ 62(3)	Announcement of the specialist companies	Businesses, obligations to provide information	A: 6 000 K: EUR 16.40/case E: EUR 980 000/annum
124	§ 62(4)	Withdrawal of certification	Businesses	Negligible
125	§ 63(1) and (2)	Certification of the specialist companies (see no. 121)	Businesses, obligations to provide information	A: 6 000 K: EUR 630/case E: EUR 3.8 million/annum
126	§ 63(2) point 2	Appointment of a person responsible within the company	Businesses, obligations to provide information	A: 6 000 K: EUR 52.40/case E: EUR 315 000/annum
127	§ 63(3)	Certification document	Businesses, obligations to provide information	A: 6 000 K: EUR 16.40/case E: EUR 99 000/annum
128	§ 64(1)	Specialist company training	Businesses	A: 12 000 K: EUR 580/specialist company E: EUR 7.0 million/annum
129	§ 64(2)	Specialist company notifications	Businesses, obligations to provide information	A: 1 200 K: EUR 32.50/case E: 39 000
130	§ 64(3)	Return of the certification document	Businesses	Negligible
131	§ 65	Proof of status as a specialist company	Businesses, obligations to provide information	No change in the financial burden
132	§ 67	Publication of existing classifications	Federal Government administration	One-off K: EUR 925 E: EUR 925
133	§ 68	Orders following a change in classification	Federal State administration	No change in the financial burden
134	§ 69(3)	Establishing the variations between the administrative instruction concerning substances that are hazardous to water (VAwS) and the	Businesses	A: 7 000 K: EUR 52.40/case E: max. EUR 367 000/5 years

		Ordinance on facilities for handling substances that are hazardous to water (AwSV)		
135	§ 69(4)	Orders	Federal State administration Businesses	No entry possible
136	Appendix 7 points 2.2 and 2.3	Basic requirements pertaining to liquid manure and slurry installations or silage seepage facilities (JGS-facilities)	Businesses	No change in the financial burden
137	Appendix 7 point 3.1	Leak detection system	Businesses	A: 1 450 K: EUR 8 500 E: EUR 12.3 million annum
138	Appendix 7 point 6.1	Obligation to disclose in the case of liquid manure and slurry installations or silage seepage facilities	Businesses, obligations to provide information	A: 1 900 K: 1 hour E: EUR 42 000/annum
139	Appendix 7 point 7.1	Handling the notification of liquid manure and slurry installations or silage seepage facilities	Federal State administration	A: 1 900 K: 0.5 hours E: EUR 25 750/annum
140	Appendix 7 points 7.2 and 7.3	Obligations incumbent upon the operator (monitoring, measures in the event of damage)	Businesses	No change in the financial burden
141	Appendix 7 point 7.4	Obligation to check	Businesses	A: 1 900 K: EUR 750 E: EUR 1.4 million/annum
142	Appendix 7 point 7.4	Orders	Federal State administration	No entries possible

A: Number of cases per year
K: Costs per case
E: Compliance costs per annum

Notes on individual points

Preliminary comment on points 1 to 31: In both the Federal States Berlin and North Rhine-Westphalia, the classification of substances hazardous to water into water hazard classes (WHC) was not continued in the last revision of the administrative instruction concerning substances which are hazardous to water [Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen - VAwS] in those states. The retention of the WHC now leads to an additional compliance cost in both Federal States. This does not relate to the classification of substances, since these are classified at a federal level, but to the classification of mixtures. In addition, there are changes in the requirements derived from the WHC and therefore an additional compliance cost both for the operators and for the authorities. As stated earlier, this compliance cost for individual Federal States is not shown.

The compliance cost for the classification of substances and mixtures does not fundamentally changes, since the regulations already existed up to now. Additional costs arise only in the small number of cases where new regulations needed to be made for reasons of legal coherence or legal certainty.

Items 1 and 2 are merged, since these deal with processes interacting with each other. In recent years, around 100 substances per year were newly classified by the industry. This number is currently being increased by REACH and is around 200-300 substances per year. The average effort for the assembly of the information, entry in the documentation form and transfer to the Federal Environment Agency should be assumed to be 1 day (8 hours). On the basis of an hourly rate of EUR 61.20, total costs come to (250 x 8 h x EUR 61.20=) EUR 122 000 per year. An **additional** compliance cost (change in workload) is not expected.

Re No. 3: Changes in classification are only very rarely requested by the operators. According to previous experience, the number of cases is approx. 20 per year. The cost of investigation and in particular justification is roughly doubled and by contrast to the normal procedure is around 2 days (16 hours) per case. This results in total costs of (20 x 16 h x EUR 61.20=) EUR 20 000 per year. An **additional** compliance cost is not expected.

In order to satisfy the information obligation of self-classification, the total annual costs (for points 1 to 3) thereby come to EUR 142 000. However, the compliance cost does not change, since the regulation was already in force.

Re No. 4: The Federal Environmental Agency [Umweltbundesamt, UBA] must as before check every self-classification for completeness and plausibility. The workload is similar to that of the operator, so that total costs for the Federal Environmental Agency should be assumed to be (250 x 8 h x EUR 57.80=) EUR 116 000 per year. These costs include request for further information and their processing. An **additional** compliance cost is not expected.

Re No. 5: For some of the documentation forms submitted, further questions arise or more information must be added by the operator. This arises in around 50-100 cases per year. On the basis of comparable workload of 1 day per case, total costs come to (75 x 8 h x EUR 61.20=) EUR 37 000 per year. Corresponding further information already needed to be processed, so that no **additional** workload is to be expected.

Re No. 6: The newly-introduced sample testing is to be carried out in approx. 10 % of the cases, i.e. 20-30 cases per year. There is as yet no experience of the time required, but it can be assumed that in this case also two days should be sufficient for the request or reminder and validation of the test reports. This results in total costs of (25 x 16 h x EUR 57.80=) EUR 23 000 per year. The change in workload is therefore EUR 23 000 per year.

Re No. 7: The grouping of substances into groups is a relatively rare process, but when carried out it requires a precise definition and delimitation of the substances belonging to a substance group. No more than 10 substance groups are formed every year, so for a workload of 2 days per substance group, total costs of (10 x 16 h x EUR 57.80=) EUR 9 000 per year result. An **additional** compliance cost is not expected.

8 and 9 can be combined, since every decision also needs to be reported to an operator. The final classification of the substances including the necessary documentation in the Federal Environmental Agency is estimated as requiring half a working day per substance. On the basis of 200-300 substances per year, total costs come to (250 x 4 h x EUR 57.80=) EUR 58 000 per year, which corresponds to the workload up to now. Through the newly-introduced creation of a legally-binding decision through the Ordinance on facilities for handling substances that are hazardous to water, there is an additional workload of around

0.5 hours per case compared with the current notification. The **additional** workload is therefore (250 x 0.5 h x EUR 35.70=) EUR 4 700.

Re Nos. 10 and 11: The classification of substances hazardous to water did not previously take the form of an administrative decision. This is now changed, for reasons of legal consistency. If an operator appeals the classification decision of the Federal Environment Agency, additional compliance costs arise. In the event of an appeal process, two working days per appeal must be estimated. The number of appeals per year is expected to be approx. 20. The additional workload is therefore (20 x 16 x EUR 57.80=) EUR 18 500 for the administration and (20 x 16 x EUR 61.20=) EUR 19 600 for industry.

Re No. 12: The publication of the decision on classification of a substance on the internet costs negligible workload and is done as part of the documentation of the classification. The "Rigoletto" search programme of the Federal Environment Agency is already available on the internet. The average annual costs to support this system are around EUR 30 000 per year. These costs are not changed by the Ordinance on facilities for handling substances that are hazardous to water. The printing of the newly-classified substances in the Federal Journal, which is to appear approximately six times a year, should be assessed as taking half a working day. This results in costs of (6 x 4 h x EUR 35.70=) EUR 900 per year.

Re No. 13: New classification or a change in a classification is increasing with the availability of new substance material from REACH and could in future come to approx. 50 cases per year. Since only a few data are exchanged in such cases, the cost for industry is minor and comes to around 2 hours. The total costs for industry thereby come to a total of (50 x 2 h x EUR 61.20=) EUR 6 100 per year. The workload for the Federal Environment Agency is comparable to that for Nos. 4, 8 and 9, around half a working day. This results in total costs of (50 x 4 h x EUR 57.80=) EUR 12 000 per year. No **additional** compliance cost is to be expected, since new findings already need to be assessed.

Re Nos. 14 and 15: For changes in classification, approx. 5 appeals should be anticipated. two working days (16 hours) should be estimated both for business and for the Federal Environment Agency. This leads to costs of (5 x 16 h x EUR 61.20=) EUR 4 900 for business and (5 x 16 h x EUR 57.80=) EUR 4 600 for the Federal Environment Agency.

Re No. 16: The operator was already required to report any significant changes to the authority. This follows from the preliminary note on Annex 3 of the administrative provision concerning substances which are hazardous to water [Verwaltungsvorschrift zur Änderung der Verwaltungsvorschrift wassergefährdende Stoffe, VwVwS] of 29 May 1999. Under § 4a (3) of the Hazardous Substances Ordinance of 26 October 1993 referred to there (Federal Law Gazette No. 57), all confirmed scientific findings must be taken into account and further investigation made for substances which have not previously been notified. This regulation is continued with § 7 (2) – and analogously § 9 (2) for mixtures. This type of information on major changes has however hardly been received and plays an entirely secondary role. No **additional** compliance cost is to be expected since the information obligation is continued in the hazardous substances legislation.

Re Nos. 17 and 18: As with substances, the two steps can be merged. The number of self-classifications for mixtures is considerably higher than those for substances, since each operator must make nearly every classification separately and can only refer to a previous one in a few cases. The authorities test approx. 50 000 facilities per year for the first time, excluding fuel oil consumer facilities and filling pumps, since those are using familiar substances. Many of the facilities mentioned use defined substances and not mixtures. For existing facilities, changes may also arise in the mixtures used, which then also need to be assessed afresh. There is no reliable estimate of the number of classifications of mixtures made each year. In the following, it is assumed that two thirds of the 50 000 facilities, i.e. 33 500 installation, need to be classified. There are also no reliable figures on the type of

classification, i.e. whether it arises from the mixture of known substances or from investigations. If the classification is made on the basis of theoretical knowledge, the workload should be negligible, since reference can be made to the existing classification of substances and the result obtained by a formalised calculation. The workload for a classification of this type should be around 0.5 hours per case. However, industry reports that in individual cases the time required may be up to 8 hours. If investigations of mixtures are required, the time need should be around 2 days, to which must be added the costs of the investigations, primarily bio-tests, usually EUR5 000 per mixture. According to industry, however, the costs may in individual cases be as high as EUR 20 000. In the following, costs of EUR7 500 are therefore assumed.
If one assumes that 95 % of all mixtures are classified on the basis of the classification of the substances used, then for 33 250 facilities entering operation each year for the first time for which a mixture is classified, costs arise of (33 250 x 0.5 x EUR 61.20=) EUR 1 000 000 per year. For the remaining 1 750 facilities, for which the classification is made on the basis of an investigation, the following compliance cost results: For the ordering and processing of the investigations, 2 days (according to the industry, up to 5 days in particular cases), i.e. (1 750 x 16 h x EUR 61.20=) EUR 1.7 million plus the analysis costs of around (1 750 x EUR 7 500=) EUR 13 125 million. The total costs of these classifications of mixtures have accordingly been around EUR 15 million per year up to now. The future cost will not be different. In view of the tendency for the number of installations to decline, the compliance cost will in future even tend to decline rather than increase. No change in the workload is therefore shown.
The calculation shown only applies in the case that the mixtures are not fixed. These are categorised under the substances generally hazardous to water and do not need to be classified. There are no statistics on the number of operations that work with fixed substances hazardous to water. The Federal Statistical Office [Statistische Bundesamt] (Technical series 19, row 1), however, shows for 2010 alone in the area of construction waste treatment facilities a figure of 2 073 facilities. It can be approximately estimated that about a fifth of these facilities are newly established or changed each year and every operator of these facilities must classify the construction waste processed. Given a working time of 8 hours per classification (cf. Nos. 1/2) including documentation, this results for this sector in a **saving through the new regulation** of (400 x 8 h x EUR 61.20=) EUR 196 000 per year.

Re No. 19: There are no data available on the number of mixtures, which are seen as commercial secrets. The workload for the inspection is however so small for the operators and authority that it can be disregarded, especially as it is not mandatory.

Re No. 20: The workload for the inspection of the documentation for the self-classification of mixtures usually arises as before together with the overall approval documentation. The workload can accordingly be disregarded. No additional workload can, in any case, be seen.

Re Nos. 21 and 22: It is relatively rare that further documentation is required by the authority, as may already arise in connection with existing approval of facilities. According to the Federal States, the number of checks of classifications is relatively small and will usually be under 100 per year for each state. For the whole of Germany, around 1 000 cases per year can be assumed. The preparation and subsequent delivery of the documentation requires around 4 hours per case for business. This results in compliance costs of (1 000 x 4 h x EUR 61.20=) EUR 245 000 per year. Given an average processing time of around 3 hours in the administration, this results in a compliance workload for the administration of (1 000 x 3 h x EUR 58.10=) EUR 174 000 per year. The new Ordinance will not lead to any change. An **additional** compliance cost is not expected.

Re No. 23: The Federal States and compliance authorities have already raised question with the Federal Environment Agency in the past during discussions on the classification in the class of substances hazardous to water. There was no fixed regulation for this, so the advice

was provided in the form of official assistance. Up to now, approximately 200 to 300 enquiries were made each year, and it can be assumed that this number will not change significantly. Given an average processing time of 1 hour this already leads to **existing workload** for the Federal Environment Agency of (250 x 1 h x EUR 57.80=) EUR 14 000. **No change in the compliance workload is to be expected.**

Re No. 24: In accordance with § 3(2)point 8, solid mixtures are normally seen as generally hazardous to water, unless they have already been classified as not hazardous to water (§ 3(2) sentence 2) or they can be classified as not hazardous to water under § 10(1). Under the current state legislation, each operator needed to make the distinction between substances hazardous to water and substances not hazardous to water. The new regulation, which in particular in the area of waste draws on information mandatory under waste management law, will significantly simplify the decision. A workload of 1 hour is assumed for the documentation of these already available data. This leads to a compliance cost of EUR 61.20 per facility with a substance not hazardous to water. For facilities with several mixtures, the workload increases in proportion. There is no information on the number of such facilities, so an estimate of the compliance cost is not possible. However, compared with the current regulation, the procedure is a simplification, so that in any case there will be **no additional** compliance cost.

Re No. 25: The regulation on the classification of a solid mixture in a class of substances hazardous to water corresponds to the previous administrative regulation. It can be assumed that a classification of the mixtures by the manufacturer is made on the basis of available data on the substances. The compliance cost is therefore negligible. No **additional** compliance cost arises.

Re Nos. 26 - 30: The regulations correspond to the previous compliance practice. An inspection of facilities is among the duties of the responsible authorities according to § 100(1) of the WHG [Wasserhaushaltsgesetz]. During such an inspection, the operator is required to provide information on the substances being used. This corresponds to the current compliance process. The **additional compliance cost resulting from the regulations is negligible.**

Re No. 31: Mixtures are not normally classified by the Federal Environment Agency. In special cases, however, it may in future be appropriate to undertake a national classification (cf. Grounds). No statement can be made on the frequency, though five cases per year should already be an absolute maximum. In view of the required separate investigations of the Federal Environment Agency, a duplicate cost for substance classification (cf. Nos. 1 and 2) of 8 hours is assumed. This results in additional compliance costs of (5 x 8 h x EUR 57.80=) EUR 2 300 per year.

Re No. 32: The Commission for the Evaluation of Substances Hazardous to Water ([Kommission zur Bewertung wassergefährdender Stoffe, KBwS]) already exists and his the task of developing proposals for the classification of substances and mixtures in classes of substances hazardous to water and to develop the assessment bases further (BAz No. 74 of 19 April 2007). The classification of substances and mixtures will be made in future by the Federal Environment Agency. The KBwS is only brought in for particular cases. This will result in a reduction of workload for the KBwS. The main focus of the work of the Commission will in future be on conceptional questions. This may lead to changes in the staff and the areas of focus, but the workload required will not change.
The Commission consisted up to now of 12 members. As before, there are expected to be two two-day meetings per year. This results for an hourly rate of 52.40 for scientific and technical services in a cost of (12 x 2 x 16 h x EUR 52.40=) EUR 20 000. To this must be added travel costs of (24 x EUR 250=) EUR 6 000, bringing the total to EUR 26 000 per year. No **additional** compliance cost is to be expected, since the frequency and length of the meetings is not expected to change, so far as can be anticipated.

Re No. 33: The need to define facilities and possible to distinguish them from others also applied under the previous state regulations. Under point 6.2 of the Technical Regulations for Substances Hazardous to Water [Technischen Regel wassergefährdende Stoffe, TRwS 779], a distinction under water legislation was required for the facility description. No **additional** compliance cost arises as a result.

Re No. 34: Most Federal States have already given their authorities the possibility to make different requirements. This compliance practice has proved successful and will be continued. There are only partial data on the frequency of such official regulations, going up to 60 cases per state. The average processing time for a case is 4 to 6 hours. On the basis of 30 cases per year and Federal State, this leads to compliance costs of (480 x 5 h x EUR 58.10=) EUR 139 000 per year. It can be assumed that the workload will not change, so that **no additional** compliance costs arise for the Federal States.

Re No. 35: The regulation constitutes a continuation of § 19i(3) of the former version of the WHG. There are no data on the frequency of such official regulations, but the indication from the statements of the Federal States is that it will be very low. It can be assumed that the workload will not change, so that **no additional** compliance costs arise for the Federal States and business.

Re No. 36: It is hardly possible to estimate the number of cases of this very far-reaching regulation and in the case of many Federal States newly introduced in the Ordinance on facilities for handling substances that are hazardous to water compared with the model VAwS. Some Federal States assume up to 150 cases per year in future. In Federal States where such a regulation already existed, no change is to be expected. An estimate can be made that 1 000 additional cases per year could arise across Germany from this possible exemption. Exemptions are only made at the request of the operator. It can be assumed that a non-trivial workload arises from the operator and the authority of the order of 6-8 hours. This leads to a compliance cost of (1 000 x 7 h x EUR 58.10=) EUR 407 000 per year for the authorities and (1 000 x 7 h x EUR 61.20=) EUR 428 000 per year for business.

Re No. 37: § 15 continues the basic requirements of the model VAwS. No **additional** compliance cost can be anticipated as a result.
The regulation that facilities should be so planned that the requirements of the Ordinance on facilities for handling substances that are hazardous to water are observed has been added, but facilities already needed to be planned in this way. Primarily, therefore, the legal position of the operator is strengthened. An additional compliance cost is thus not expected.

Re No. 38: Most administrative regulations or comparable decree of the Federal States contained a corresponding regulation. The new regulation is somewhat less stringent, since substances hazardous to water must only be removed as far as technically possible. No **additional compliance cost arises.**

Re No. 39: The requirements for the retention of substances hazardous to water correspond to those specified in Annex 1 of the model VAwS under point 1.1 for R_1 (retention of the volume that could be released in the event of operational malfunctions until suitable safety measures can be effectively taken) or that were described in the administrative regulations or Technical Regulations for Substances Hazardous to Water. No **additional** compliance cost arises. The watertight surface seal for facilities with substances in WHC 1 between 220 and 1 000 litres (§ 18(3) sentence 2) is e.g. readily available on the market as a coating material or as a finish construction part, costing a few hundred EUR per facility. No statement can be made on the number of these facilities which in future must be equipped with the stated partial retention volumes, because of the absence of any statistical data.

Re No. 40: The requirement for a complete retention volume R_2 is derived from Annex 1 of

the model VAwS. This specified that R_2 was required for storage facilities and facilities for the production, processing and use of WHC 2 substances from 100 m^3, and for facilities with WHC 3 materials from 0.1 m^3 . The new regulation makes no changes for facilities with WHC 2 substances. For facilities with WHC 3 substances, only facilities with a volume of at least 10 m^3 are covered. The new regulation therefore leads to a relaxation and therefore to no **increase in the existing workload**. It is not possible to show the reduction of the compliance cost because of the inadequate state of the data.
North Rhine-Westphalia has deviated from this regulation in its VAwS. Since the 2001 revision of the VAwS there, there is no longer any R_2. Through the federal regulation, the previously minor cost for the establishment of new facilities is standardised across the country.

Re No. 41: The model VAwS contains no specific regulation on how facilities for which the access of rainwater is to be prevented should be drained. However, the solutions now adopted in the Ordinance on facilities for handling substances that are hazardous to water correspond to how this has been implemented in practice. No **additional** compliance cost **arises**.

Re No. 42: This regulation was added to the Ordinance on facilities for handling substances that are hazardous to water. However, these facilities were already drained, though the admissibility of emission into surface waters was regulated by the water authorities as part of the permitted emission of rainwater under § 57 of the WHG. This option to decide in individual cases has now been included in the Ordinance on facilities for handling substances that are hazardous to water. The Federal States anticipate approximately 100 to 150 such decisions per year, with an average processing time for 4 hours. On the basis of around 1 500 cases, this leads to a compliance cost of (1 500 x 4 h x EUR 58.10=) EUR 349 000 per year. Since drainage already had to be regulated, there is no **additional** compliance cost.

Re No. 43: The retention of fire extinguishing water was previously regulated in § 3 point 4 of the model VAwS and in No. 8.2 of TRwS 779. The regulation is basically continued, so no **additional** compliance cost arises.

Re No. 44: The requirements for aboveground pipelines were taken from § 12(3) and Table 2.3 of Annex 1 of the model VAwS. The hazard assessment was only required under the model VAwS for pipelines with WHC 2 and 3 substances. Consequently, for pipelines with WHC 2 and 3 substances, there is **no change** in the compliance cost.
For pipelines with WHC 1 substances, no requirements have been made up to now. Under the new regulation, a retention fitting is also required for these facilities, although this may be dispensed with, without a hazard assessment, if the pipelines lead of surfaces which on the basis of their hydrogeological protection level require no special protection.
Even for industry, an estimate of the additional compliance cost is hardly possible. As an estimate, a total of 3 500 facilities with WHC 1 material can be assumed. If one assumes that 10 % of these facilities lead across areas in particular need of protection, this means that there are 350 facilities for which a hazard assessment must be made. A hazard assessment of a pipeline facility is estimated to cost approximately EUR 2 000 per case – largely independently of the length of the pipeline. For 350 installations for which such a hazard assessment must be made, this results in an additional **one-time** compliance cost for the hazard assessment of (350 x EUR 2 000=) EUR 700 000.
If this shows that the pipeline must be laid double-walled, costs of EUR 1 000/m of pipeline will arise. However, for pipeline with materials of the classes WHC 2 and WHC 3 – which are considered more critical – such a requirement was only made in extreme cases – and then usually for other reasons. It can on this basis be assumed that pipelines with WHC 1 substances will not be subject to such a requirement. The hazard assessment is more likely to lead to a need to adjust seals, flanges and valves. Since each pipeline is technically different in design, the costs of these technical measures cannot be reasonably estimated.

In order to estimate the **annual** costs, it is assumed that the 3 500 facilities have been installed during the last 50 years and that 70 new cases of new facilities can be assumed each year, of which 7 lead across areas in particular need of protection, requiring a hazard assessment. The additional compliance costs is thereby (7 x EUR 2 000=) EUR 14 000, in addition to the costs of technical measures that cannot be estimated.

Re No. 45: The regulations for underground pipelines continue those in § 12(2) of the model VAwS. Thus there are here **no additional** compliance costs.

Re No 46: The special operational rules for the – very rare – joint use of a waste water facility continue § 21 of the model VAwS. Thus there are **no additional** compliance costs.

Re No. 47: The regulations for filling and emptying were taken from § 19k of the former version of the WHG. No **additional** compliance cost **arises**.

Re No. 48: The regulation takes over the previous § 19i(2) sentences 1 and 2 of the WHG. No **additional** compliance cost arises as a result.

Re No 49: The regulations takeover the regulations of § 8(1 and 2) of the model VAwS. According to the Federal Statistical Office, there were in 2010 a total of 837 accidents with substances hazardous to water. Since a report usually lead to local inspections, the Federal States estimate a workload of up to 10 hours per case. This results in total costs for the local administrations of (837 x 10 h x EUR 58.10=) EUR 486 000. The costs for business and citizens are usually only half as much, since they are on the spot and naturally know their facility better. This results in total costs for them of (837 x 5 h x EUR 61.20=) EUR 256 000. The costs for the repair of damages are not included in these amounts.
It is to be hoped that the number of cases will tend to fall rather than rise, so that an **additional compliance cost does not arise**.

Re No. 50: The regulation requiring that repair work must be made on the basis of a concept is new in this form. It can be assumed that corresponding conceptional consideration were also made up to now. More detailed information on this is however not possible to obtain.
It can basically be assumed that most repair work is conducted on facilities which have a significant defect. According to the statistics of the expert organisations, this arises for around 5 000 facilities per year. Depending on the size and complexity of the facility, the costs for such a repair concept are between EUR 500 and EUR 5 000. For average costs of EUR 2 000, this leads to total costs of EUR 10 million per year. In the "ex ante guidelines", it is stated that half of the costs would have arisen anyway, so that an additional compliance cost of EUR 5 million results. This should however be set against a corresponding benefit arising out of the improved planning of repair works, though this will not be considered in more detail here.

Re Nos. 51 and 52: The regulation in § 27 is a continuation of that in § 14 of the model VAwS. For recycling facilities in particular, the previous TA Luft [Technical instructions on air quality control] on 24 July 2002 applied. According to this, "Waste storage installations should be so established and operated that pollutants cannot enter the soil or the surface water". There is therefore no increase in the requirements, so there is no **additional** compliance cost.

Re No. 53: The regulation continues requirements already existing in the administrative rules of some Federal States (e.g. North Rhine-Westphalia No. 3.1.3 or BE 5.1.3). The starting point of 5 % retention volume is a reduction of the otherwise required provision of retention volumes and also simplifies compliance. In most Federal States, this will therefore lead to cost savings compared with the currently applicable state legislation. The number of facilities affected has not been statistically collected, but should be very small. A specific statement on the compliance cost is not possible, but the simplification will tend to lead to a reduction of

the cost in a number of Federal States.

Re No. 54: The regulation is a continuation of Table 2.2.2 in Annex 1 of the model VAwS. According to this, these facilities needed to have an impermeable and durable surface (F_1). Only the trans-shipment of liquids of type WHC 1 in packaging which satisfies the regulations for hazardous substances or is equivalent does not need to be done over an impermeable surface. This regulation for WHC 1 substances was not continued, since in trans-shipment facilities no differentiation is made according to WHC. There are no facilities known that only work with such substances. The level of requirements remains the same for all other facilities, so there is **no additional** compliance cost

Re No. 55: The regulation continues that of Table 2.2.4 of the model VAwS. The regulation of bulk goods is new, but was directly derived from the general requirements of the WHG. It contains no new material requirements. Thus there are **no additional** compliance costs.

Re No. 56: The regulation continues that of Tables 2.1.3 and 2.1.4 of the model VAwS and thus leads to **no additional** compliance costs.

Re No. 57: The regulation continues that of Table 2.2.3 of the model VAwS and thus leads to **no additional** compliance costs.

Re No. 58: The regulation is based on that on fuel oil consumer installations in § 33 of the Ordinance on facilities for handling substances that are hazardous to water and extends the area of application to some HBV facilities as well that are rarely filled. For these facilities, the requirement to strengthen of the filling space especially can be dispensed with. This was already the approach in some Federal States.
For costs of EUR 60 – 80/m^2 for asphalt surfaces and 100 to 120 EUR/m^2 for concrete surfaces (information from the industry) and a surface to be sealed of approx. 10 m^2, savings of approx. EUR 1 000 per facility result if corresponding requirements are made and implemented. According to industry, there is a six-figure number of transformers alone for which the relevant costs could apply. However, since there are no statistical data, no statement is made on the reduction of the filling cost.

Re No. 59: The regulation continues that of Table 2.1.5 of the model VAwS and thus leads to **no additional** compliance costs.

Re No. 60: The regulation is derived from the “Empfehlungen der LAWA an wasserwirtschaftliche Anforderungen an Erdwärmesonden und Erdwärmekollektoren” ["Recommendations from LAWA for water management recommendation for geothermal probes and collectors"], May 2011, which was agreed to by the Environment Minister conference by circular solution. This continues a regulation which was taken into account in practice but had not been legally standardised. No additional compliance cost arises as a result.
Paragraph 3 standardises comparable requirements for solar collectors and cooling plants. There have been no special regulations for these facilities up to now in most Federal States, so that basically the fundamental requirements had to be applied. However, no cases are known in which corresponding requirements were made by the implementing authorities. The regulation made here corresponds basically to the installation conditions currently usually applied, so that **no additional** compliance costs arise as a result.

Re No. 61: The regulation for oil-filled cables is only significant for major cities. Only the Berlin VAwS had an explicit regulation on this, which is continued in this form. The industry estimates that there are approximately 15 000 oil and ground cable installations in Germany. As far as could so far be judged, this Ordinance does not lead to adjustment measures needing to be taken. No **additional** compliance cost arises.

Re No. 62: Biogas facilities were up to now regulated in the Federal States through instruction sheets, decrees or technical regulations, which were mostly published only in the last few years. The Ordinance on facilities for handling substances that are hazardous to water regulation does build on the experiences thereby made and the ideas of the Federal States and brings them together, though the deviations may vary in size according to the state and age of the facility.
§ 38 contains substantially two requirements which had previous only been partially included or implemented, leakage recognition and surrounding walls.
The number of existing biogas facilities (at the end of 2011) is according to information from industry around 7 200. By the end of 2013, new construction of approx. 700 facilities should be anticipated, though the number of new constructions should then fall substantially.
For new construction, the costs of leakage recognition come to between EUR 7 500 and 15 500 per container, depending on the diameter of the container. The containers have been built in accordance with this since around 2007.
The costs for a surrounding wall are approx. EUR 10 to 20 per metre for new construction. The length of the surrounding wall varies, but can be estimated as an average of 350 metres. Costs resulting from this come to EUR 3 500 to 7 000 per facility.
The additional compliance costs for new construction thereby come to – depending on the previous varying requirements of the Federal States – an average of EUR 5 250 for the surrounding wall and EUR 11 500 for the leakage recognition, i.e. a total of at most (700 x EUR 16 750=) EUR 11.7 million for all new construction in 2012 and 2013, or EUR 5.8 million per year. Since a significant number of Federal States have been making corresponding requirements, it is assumed that the compliance costs are around a quarter lower. They are then at approx. EUR 4.3 million per year.
The costs for retrofitting a surrounding wall are significantly higher, since usually there is no appropriate floor material still available. In some cases, retrofitting a surrounding wall is also not technically feasible. According to industry, around 5 700 of the existing biogas facilities has no surrounding wall. Specific information on a possible adjustment can only be given in individual cases. It is estimated that the cost at most are doubled and thereby are between around EUR 7 000 to 14 000 per biogas facility. The result in the next 5 year (cf. § 69(10)) is a total cost of (5 700 x EUR 10 500=) EUR 60 million or EUR 12 million per year.
According to industry, around 3 000 of the existing biogas facilities have no leakage recognition, mainly those built before 2004. For around 2 300 facilities which have leakage recognition, the requirements of the Ordinance or its associated regulations are not met, as e.g. certain facility parts are not included. Retrofitting of leakage recognition in the form of a "sheet under the containers" is not technically possible. What measures (of a technical or organisation nature) can be recognised in future in order to meet the requirements of the Ordinance on facilities for handling substances that are hazardous to water is currently purely speculative. The estimate of the costs for retrofitting the current facilities is therefore not possible at this time.

Re No 63: The regulation of facilities to handle gaseous substances that are hazardous to water is new. Under § 13(3) of the model VAwS, these facilities were of a simpler or more traditional type. Technical requirements were not specified. A new regulation had to be made because of the revision of the WHG. The required measures are derived from a hazard assessment. Information on how these facilities are currently design and how many such facilities actually exist is not available. It can however mainly be assumed that these facilities are also subject to emission protection legislation and that comparable requirements are already made there. Industry is also unable to say whether addition compliance costs will result.

Re No. 64: The allocation of facilities to hazard levels follows § 6 of the model VAwS and is a consequence of the classification of substances hazardous to water in water hazard classes. The obligation to classify facilities in hazard levels is not changing (except in North Rhine-Westphalia) and does not lead to any additional compliance costs.

Re No. 65: The duty of disclosure is an instrument which was laid down in many Federal States in the water legislation.
The data required for disclosure are available when qualified planning of a facility is made. Assembling and submission requires a workload of less than an hour for most operators. Facilities that are subject to other licensing procedures, in particular under the Federal Emission Control Act [Bundesimmissionsschutzgesetzes - BImSchG], need not be considered further here, since these do not have a duty of disclosure.
According to the statistics of the SVO, the number of initial tests fell between 1999 and 2010 from 85 695 to 37 425 facilities. This is primarily due to the declining number of fuel oil consumer installations.
The compliance cost on the part of operators can be estimated for an average number of 40 000 facilities per year and one hour of processing (40 000 x EUR 38.10=) EUR 1.52 million for industry.
The compliance costs for the authorities who undertake a plausibility check or draw the attention of the operators to problems if necessary and register the facility is estimated on the basis of data from the states at an average of 3 hours. This results in compliance costs of (40 000 x 3 h x EUR 27.10=) EUR 3.25 million per year for the authorities.
Duties of disclosure have currently been implemented in 11 Federal States in state legislation. An addition compliance cost therefore only arises in 5 Federal States, which are however for the reasons stated in the introduction not shown separately.

Re No. 66: For the duty of disclosure on the change of operator, which does not apply to fuel oil consumer installations, only the new operator data need to be shown. The workload for a corresponding letter is between 15 and 30 minutes for the operator; the change in a file by the authority should require a similar workload. In each case, only a moderate level of qualification is assumed.
Data are only available from a few Federal States on the frequency of such a change in operator. Insofar as such a regulation already exists, the duty of disclosure is evidently not fulfilled in every case. The figures vary from about 50 cases per year to over 2 000. A cumulative figure is not possible on this data basis. If one assumes that around 1 % of the facilities change operator each year, this indicates 2 000 cases (1 % of a total of 200 000 facilities).
This leads to a compliance cost of (2 000 x 0.5 h x EUR 23.80=) EUR 24 000 per year for the operators and (2 000 x 0.5 h x EUR 27.10=) EUR 27 000 per year for the administration.
The information from some Federal States is that the compliance cost has so far been negligible, and no change is expected.

Re No. 67: Assessments of suitability are currently carried out in the great majority of Federal States. Bavaria has introduced a simplified procedure.
According to information from the Federal States, the workload for the simplified suitability assessment is around 5 hours per case. The workload is heavily dependent on the quality of the documentation. Consequently, double processing time may occur. The number of cases varies in the Federal States between 10 and 250 per year. This results in a workload up to now of (5 h x EUR 58.10 x (10 or 250) x 16=) EUR 46 000 to 1.16 million per year.
The workload for industry is lower since the documentation required for the suitability assessment is also needed for a qualified facility plan and tender. The preparation of documentation is thus estimated to be 3 hours. This results in a workload up to now of (3 h x EUR 61.20 x (10 or 250) x 16=) EUR 29 000 to 734 000 per year.
Compared with the currently applicable regulations of at Federal State level and the usual implementation practice and taking into account the previous comment, this will not lead to **any additional** compliance costs.

Re No. 68: An application for the suitability assessment is basically only still foreseen for facilities of hazard level D, if these facilities do not come under the Federal Immission Control Act and therefore no separate procedure is carried out by the water authorities. The application corresponds to what needed to be made up to now, so that no significant

additional compliance cost for D facilities is to be expected. The disclosure and suitability assessment procedures can in fact be brought together.
The special regulation for fuel oil consumer installations, according to which no suitability assessment procedure need be followed for these, is not expected to lead to any additional compliance cost.
The information from the Federal States is that suitability assessment procedure should not be expected to occur very frequently. 10 to 120 cases per Federal State were indicated, leading to a workload of 8 to 12 hours, though in difficult cases up to 5 days. This results in compliance costs for 300 cases in Germany of (300 x 10 h x EUR 58.10=) EUR 174 000 per year. For industry, a workload for the separate preparation of the application is expected to be similar the simplified procedure, which takes around 5 hours. This results in a cost of (300 x 5 h x EUR 61.20=) EUR 92 000 per year. A change in this situation is **not** expected if the level of facility construction remains stable, so that no additional compliance cost results.

Re No. 69: The facility documentation is based on the operational instructions according to § 3 point 6 of the installation catalogue according to § 11 of the model VAwS and No. 6.2 of the TRwS 779. Compared with the previously applicable regulations, this documentation does need to be made for all facilities, but the extent of the documentation is limited to the most important information. The operator must have the corresponding data available, so that no serious effort is required.
The assembly of the required, available documentation should not normally need more than 1 hour per facility, although industry assumes up to 4 hours for its facilities. For fuel oil consumer installations, the requirement should be met by the submission of documentation by the professional undertaking responsible for the installation.
There is no overview of all the available facilities in Germany for which documentation needs to be prepared. According to the Federal Statistical Office, there are around 200 000 facilities that are not fuel oil consumer installations. However, only documentation for those facilities requiring inspection is collected. The number of facilities not covered is likely to be considerably higher.
A specific statement on compliance costs is not possible regarding either the number of cases or the workload. For operators that have met the previous requirements from the regulations, **no additional compliance costs** are to be expected.

Re Nos. 70 and 71: The requirement corresponds to points 7.2.1 and 7.3.1 of TRwS 779. No significant additional compliance cost is to be expected, if the technical regulations have been followed.

Re No. 72: The operational instructions were taken from § 3 point 6 of the model VAwS and No. 6.2 of TRwS 779. No significant **additional** compliance costs arise as a result.

Re No. 73: The coordination of the emergency plan corresponds to No. 6.2, paragraph 4, point 2.3 of TRwS 779. **No** additional compliance cost thus **arises**. The Federal States assume a time of 6 to 10 hours for the coordination of an emergency plan, thus (8 x EUR 58.10=) EUR 460 per emergency plan. However, in many cases the emergency plan is already required under other legislation, so that the workload does exist but needs to be distributed correspondingly to other legal areas (BImSchG or Major Accidents Ordinance) as well. The information on the frequency with which emergency plans are created varies between 5 and 1 500 cases per year and Federal State. No reasonable statement can be made on this basis on the compliance cost. Since the work is being continued, it can be disregarded.

Re No. 74: The instruction for the operating staff including documentation corresponds to No. 6.2, paragraph 4, point 6 of TRwS 779. No **additional** compliance cost thus arises.

Re No. 75: The affixing of the data sheet was taken from § 3 point 6 of the model VAwS. No **additional** compliance cost arises**.**

Acquiring, completing and affixing a data sheet for existing facilities in accordance with § 45(4) points 1, 2 and 4 gives rise to a maximum workload of 1 hour per facility at a low level of qualification. There are no figures for the number of these facilities. According to industry, there are approx. 70 000 facilities with WHC 1 substances between 10 and 100 m^3, which thus fall under hazard class A. The total number of A-facilities is estimated to be five times as many. This results in total compliance costs of (350 000 x EUR 23.80=) EUR 8.33 million.

Re Nos. 76 and 77: The regulations were taken from § 19i(2) sentence 2 of the former version of the WHG and thus lead to **no additional** compliance costs. So far as is known, the instrument of official Order was only occasionally used in the past (no more than 5 times per year and Federal State). A workload of up to 4 hours per case should be assumed. The unchanging workload is therefore (5 x 16 x 4 x EUR 58.10=) EUR 19 000.

Re Nos. 78 and 79: The regulation constitutes a continuation of § 19i(2) sentence 3 of the former version of the WHG. No **additional** compliance cost arises**.**

Re No 80: The requirement for a test continues § 19i(2) sentence 3 point 4 of the former version of the WHG. According to the statistics of the professional organisations, this type of test has always been less than 1 % of all tests since 1999. No change is expected here, so that no **additional** compliance cost is to be expected.

Re No. 81: The test after the repair of defects continues former state legislation. Thus there are **no additional** compliance costs.
According to the statistics of the expert organisations, between 7 000 and 18 000 reassessments were carried out, making a proportion of the total number of tests between 2 and 5 %.

Re No. 82: The classification of the test results into the 4 classes corresponds to the procedure used by specialists in recent years. An **additional** compliance cost is therefore **not** to be expected.

Re No 83: The presentation of the test report continues the regulation of § 23(4) sentence 2 of the model VAwS. An **additional** compliance cost is therefore **not** to be expected.

Re No. 84: The affixing of the inspection sticker is a new regulation which gives the fuel oil dealer an indication that the facility was at least at the time of inspection technically working sufficiently that there is no obstacle to filling.
The time required to affix an inspection sticker after a successfully concluded inspection is around 3 minutes and can be disregarded in view of the length of an inspection and travel time to and from the location, since the number of inspection that a specialist carries out each day is unchanged. The costs of an inspection sticker depend on the type of sticker, for which there is however no specification in the Ordinance on facilities for handling substances that are hazardous to water, and is probably around EUR 1.
For a total of 1 million facilities which are due for inspection every 5 years, the total cost per year is therefore (200 000 x (3 minutes/60 minutes x EUR 52.40 + EUR 1=) EUR 724 000 per year.

Re No. 85: The provision of a new notification to private fuel oil consumer installation operators during an inspection by a specialist serves as a simplification for private individuals, who will often be unaware of the corresponding new regulations. The time required for the specialist is estimated at 3 minutes, and the cost of one copy at EUR 0.1. For a total of approx. 1 million fuel oil consumer installations, the resulting total costs as part of the 5-yearly inspection obligation are (1 million x (3/60 h x EUR 52.40 + EUR 0.1))= EUR 2.72 million. This results in costs of approx. EUR 544 000.

Re No. 86: In most Federal States, when significant defects are identified, the repair of these defects is ordered by the authority responsible. This regulation is now replaced by the repair by the operators under their own responsibility. This reduces the compliance cost for the authorities. However, the Federal States who have previously dispensed with an instruction of this kind report that operators, despite a corresponding regulation in the Federal State VAwS, wait for a reaction from the authority. The text of the Ordinance therefore leads to a reduction in workload, but evidently fails to do so in practice. No attempt is therefore made to show the reduction. There is no change in the compliance cost for industry, since in future the issuance of inspection reports will trigger the removal of defects instead of the instruction from the authority.

Re No. 87: The inspection after removal of hazardous defects and the confirmation of successful removal continues the previous Federal State regulations. Thus there are **no additional** compliance costs.
According to the statistics of the expert organisations, between 150 and 300 hazardous defects were identified each year in the last decade; the share of the total number of inspections was always less than 1 %.

Re No. 88: The decommissioning of facilities with dangerous defects continues the existing state regulations. Thus there are **no additional** compliance costs.
It can be estimated that a third of facilities with hazardous defects need to be decommissioned. According to the statistics of the expert organisations, between 150 and 300 hazardous defects were identified each year in the last decade; this means that between 50 and 100 facilities were decommissioned.

Re No. 89: The option to issue exemptions from the regulations in protected areas was not foreseen in the model VAwS, but was practised in many Federal States. There are no statistics showing how often use was made of this regulation. How far this regulation will lead to addition procedures in future cannot be estimated by the Federal States. This depends solely on the operators.
Exemption procedures are usually time-consuming, since they require a substantial consideration of the exemption facts and often also visits to the site and discussions with the applicants. The workload for each exemption is thus to be estimated at one to five working days. For the applicant, this means costs of (20 h x EUR 61.20=) EUR 1 200 per application, to which may be added costs for engineering services for planning and assessment. The costs for the authority are likely to be comparable, at (20 h x EUR 58.10=) EUR 1 100. There is no information on the frequency of these procedures. Since such procedures can also be followed under the WHG and have also been carried out by the Federal States up to now, **no additional** compliance costs arise.

Re No. 90: The comments on exemptions in water protection areas apply analogously to flooding areas. Statistics are similarly unavailable.

Re No. 91: The comments on exemptions in water protection areas apply analogously for the distance regulation. Statistics are similarly unavailable.

Re No. 92: Applications and the extent of the documentation required for recognition of expert organisations broadly correspond to the provisions of § 22 of the model VAwS.
There are currently 51 expert organisations [Sachverständigenorganisationen- SVOs] in Germany, according to the statistics (as of 2010). The number has tended to decline in recent years. Since the existing recognitions basically continue under § 73(2) and the Federal States have also not limited their recognition up to now by time, the workload will not change. **An additional** compliance cost is not to be expected.
Based on the experiences of the SVOs, the preparation of an applications is associated with a workload of approx. 10 days, thus correspondingly with costs of (10 d x 8 h x EUR 52.40=) EUR 4 200.

Re No. 93: Up to now, no foreign organisations or experts have made applications. Thus there is no experience of this. However, in principle it should be assumed that the workload exceeds that for a domestic organisation, since the legal and organisational conditions of the country from which the applications comes must be established and there may be linguistic barriers. The additional workload is estimated at roughly 50 % over the costs identified in point 92, so that the compliance cost could be EUR 6 300 per organisation.

Re No. 94: The workload basically corresponds with the previous workload. The Federal States estimate the workload per recognition as 10 to 40 hours, correspondingly (25 h x EUR 58.10=) EUR 1 450 per recognition. The longer processing time is to be attributed to initial recognitions. It can be assumed that there will be no significant change in the workload.

Re No. 95: The SVOs already needed to take the responsibility for engaging an expert. The requirements have not essentially changed compared with the model VAwS and the LAWA notification, so that **no additional compliance costs** are to be expected. However, the responsibility is now entirely up to the SVO, with no participation by the responsible authority now envisaged. To this extent, there is a reduction in the compliance cost on the side of the authority, which however cannot be quantified more precisely, since there are no statistics on the frequency of such participation.
According to the statistics of the expert organisations, there were a total of 2 102 experts in 2010. The new engagement of an expert can be assumed to require a workload of one day, corresponding to (8 h x EUR 52.40=) EUR 420.
There are an estimated 100 new engagements in all organisations per year. This results in a total yearly cost for all SVOs of (100 x 8 h x EUR 52.40=) EUR 42 000, which corresponds to the current level.

Re No. 96: The cost for a deviating engagement basically corresponds to that of an engagement (cf. 95).

Re No. 97: The revocation of the recognition of an SVO was also currently foreseen, though it has not so far occurred in practice. There is therefore no experience of this. In the view of the Federal States, the revocation of recognition will lead to a significantly greater workload than the recognition itself. **An additional** compliance cost is **not** to be expected.

Re No. 98: Depending on the reason, the deletion of an engagement may lead to a workload from an hour to several days, so the costs range from EUR 100 to several thousand EUR. The announcement of the deletion, change or dissolution can be assumed to take no more than an hour, i.e. EUR 38.20. All these announcements are very rare, and there are no statistics available. The announcements also needed to be made under the previous state regulations, so that **no additional** compliance cost results.

Re No. 99: The announcements also needed to be made under the previous state regulations, so that **no additional** compliance cost results. The individual announcement procedure for each case takes at most one hour, thus EUR 38.20.

Re No. 100: The corresponding checks also needed to be made under the previous state regulations, so that **no additional** compliance cost results. Checking the tests of an expert and the associated discussions should be assumed to take an average of one day per year for each expert. For a total of approx. 2 100 experts, this results in a workload already existing today of (2 100 x 8 h x EUR 52.40=) approx. EUR 890 000.

Re No. 101: The internal exchange of information was also required under the previous recognition notifications, so that **no additional** compliance cost is to be expected. The exchange is made during 4 days in the year and should be set at 2.5 hours per expert. This results in a workload of 10 hours per expert and year, or in total (2 100 x 10 h x EUR 52.40=)

EUR 1.1 million per year.

Re No. 102: The external exchange of information was also envisaged under the previous recognition notifications, so that **no additional** compliance cost is to be expected. It is one day per organisation, so for 51 organisations (51 x 8 h x EUR 52.40=) EUR 21 000 per year, plus corresponding travel costs of on average EUR 250, thus in total EUR 34 000.

Re No. 103: The preparation of an annual report was also envisaged under the previous state regulations, so that **no additional** compliance cost is to be expected. The average workload is around 2 days per organisation, thus a total of (51 x 16 h x EUR 52.40), around EUR 43 000.

Re No. 104: The participation in further education events was also envisaged under the previous state regulations, so that **no additional** compliance cost is to be expected. Since this further education should not be solely ascribed to the Ordinance on facilities for handling substances that are hazardous to water, but is also on the basis of other legislative provisions, the workload cannot be precisely delimited and quantified. However, it should basically be assumed that every expert attends a one-day event once a year (or a two-day event every two years). Given the costs of this event of approx. EUR 300, travel costs of approx. EUR 250 and a loss of income of 8 hours per day, the total costs for 2 100 experts come to (2 100 x (EUR 300 + EUR 250 + 8 h x EUR 52.40)=) EUR 2 million. Since this cost also arises from other legal provisions, only a third is allocated to the Ordinance on facilities for handling substances that are hazardous to water. This results in a compliance cost attributable to the Ordinance on facilities for handling substances that are hazardous to water for all SVOs of EUR 680 000 per year and of approx. EUR 13 000 per year for each individual SVO.

Re No. 105: The completion of a testing diary was also envisaged under the previous state regulations, so that **no additional** compliance cost is to be expected. The workload for qualified working organisations is negligible.

Preliminary comment on 106 to 118: The quality control and monitoring bodies [Güte- und Überwachungsgemeinschaften - GÜG] were previously based on construction legislation, and now need to be recognised afresh. Currently 12 GÜGs are known. No further GÜGs are expected. The average number of staff per GÜG is estimated as 25. Some GÜGs have significantly larger staff, but some consist primarily of individuals who work with the GÜG in cooperation agreements, thus are not fixed employees of the GÜG.

Re No. 106: The preparation and submission of all the documentation for the application is basically similar to the SVOs, though excluding all documentation relating to testing, the organisation of testing and quality control. To this extent, it is assumed that the workload is only 5 days per application. The compliance cost per GÜG is therefore (5 d x 8 h x EUR 52.40=) EUR 2 100, and EUR 26 000 for all 12 GÜGs.

Re 107: The workload for the authority is likely to exceed that for an SVO, since a greater need for advice is likely to result from the new regulation, which is estimated as 10 hours. The compliance cost should then be (35 h x EUR 58.10=) EUR 2 000 per recognition. The additional total compliance cost for all 12 GÜGs is EUR 24 000.

Re 108: In order to assess the equal value of GÜGs, the same applies as for the SVO submissions (cf. point 93) in corresponding form. However, the additional need for advice is dropped, so here as well the estimate should be 35 hours or EUR 2 000 per case. There is no basis for estimates of whether and how often such a review will occur in future.

Re 109: It is assumed that the cost to engage a technical inspector is around half the cost of engaging an expert. Accordingly, around half a day should be sufficient. Assuming that the

25 individuals per GÜG is accurate, this results in total costs of (12 x 25 x 4 h x EUR 52.40=) EUR 63 000. In addition allowance must be made for the cost of appointing 2 new engagements per organisation. This results in an additional annual cost of (12 x 2 x 4 h x EUR 52.40=) EUR 5 000, making a total of EUR 68 000 for all GÜGs.

Re 110/111: The alternative engagement of a technical inspector does not result in any change in the professional workload with respect to the usual costs for an engagement. However, the permission of the authority must be obtained. 0.5 hours is estimated for this purpose for industry. This results in a compliance cost of (0.5 h x EUR 38.20=) EUR 19 per case. On the side of the administration, around an hour is assumed for the technical inspection of the proposal and 0.5 hours for the reply. This results in a total cost of (1 h x EUR 52.30 + 0.5 h x EUR 58.10=) EUR 75 per case. The frequency of alternative engagements is expected to be very low. At most 5 cases per year are to be expected. This gives industry a compliance cost of EUR 95 per year and the administration EUR 375 per year.

Re 112: The workload for the revocation of recognition of a GÜG is comparable to the revocation of recognition for an SVO. It is not possible to state whether such a measure will be necessary.

Re 113: Depending on the reason, the revocation of an engagement may lead to a workload from an hour to several days, so the costs range from EUR 100 to several thousand EUR. It is not possible to state whether such a measure will be necessary.

Re 114: The workload of the announcement of an engagement, change or deletion is no more than an hour, i.e. (1 h x EUR 38.10=) EUR 38.10. The costs of the initial engagement are included in those for the recognition of the GÜG. For (12 x 25) 300 technical inspectors in total, there should be no more than 30 letters per year. This results in a compliance cost of (30 x EUR 38.10=) EUR 1 150 per year.

Re 115: The preparation of an annual report leads to an average compliance cost of around 1 day per GÜG, where it is again assumed that it is half as time-consuming as for an SVO (cf. point 103). This results in a compliance cost of (12 x 8 h x EUR 52.40=) about EUR 5 000 per year.

Re 116: Participation in further education events should not only be ascribed to the Ordinance on facilities for handling substances that are hazardous to water but also follows from other legal provisions. The cost can therefore not be exactly delimited and quantified. However, it should basically be assumed that every technical inspector attends a one-day event once a year (or a two-day event every two years). Based on the costs of this event of approx. EUR 300, travel costs of approx. EUR 250 and a loss of earnings (8 x EUR 52.40) of EUR 420, the total costs for 300 technical inspectors comes to EUR 291 000. Since this cost also arises from other legal provisions, only a third is allocated to the Ordinance on facilities for handling substances that are hazardous to water. This results in an **additional** compliance cost for all GÜGs of EUR 97 000 per year and of EUR 8 100 per year for each individual GÜG.

Re 117: The exchange of information is made during 4 days in the year and should be set at 2 hours per technical inspector. This results in a workload of 8 hours per technical inspector and year, or for an hourly rate of EUR 52.40 in total (12 x 25 x 8 h x EUR 52.40=) EUR 126 thousand per year.

Re 118: The workload for the external exchange of information is, as for the SVOs, one day per organisation, so for 12 GÜGs (12 x 8 h x EUR 52.40=) EUR 5 000 per year, plus corresponding travel costs of on average EUR 250, thus in total EUR 8 000.

Re 119: The average annual cost for inspection of the specialist operations should be around 4 hours, i.e. EUR 210 per specialist operation.
No estimate can be made of the number of specialist operations. According to the statistics, approx. 9 000 specialist operations are supervised by the SVOs. In the following, it is assumed that a total of 3 000 specialist operations are certified by the GÜGs. In total, this gives around 12 000 specialist operations to be supervised. This results in total costs for the regular surveillance of the specialist operations of (12 000 x EUR 210=) EUR 2.5 million. Since these costs relate to the two-year certification period, annual costs arise at the level of EUR 1.25 million. A corresponding surveillance activity was in principle already present under the former legal provisions, but needed to be dealt with under construction law for the specialist operations certified by the GÜG. According to the SVO/GÜG division, around a quarter (EUR 300 000 per year) should be allocated to the Ordinance on facilities for handling substances that are hazardous to water and the GÜGs based on it.

Re 120 and 121: The compliance cost for the analysis of the results and preparation of an annual report is assumed to be on average half of that of an SVO, i.e. around half a day per GÜG, in total around EUR 5 000.

Re 122: For the organisation, advertising and conduct of a one-day training course, a workload of two days is assumed, corresponding to EUR 1 000 plus premises for EUR 500. If one assumes 30 individuals per course and that every specialist operation participates in such a course once a year, it follows that there is a total need for 400 course offers. This results in a total compliance cost of (400 course offers x EUR 1 500=) EUR 600 000 per year.

Re 123: The announcement of the certified operations is estimated at half an hour, i.e. (0.5 x EUR 32.80=) EUR 16.40 per announcement, implying EUR 980 000 for 6 000 specialist operations.

Re 124: Depending on the reason, the revocation of certification may lead to a workload from an hour to several days, so the costs range from EUR 100 to several thousand EUR. It is not possible to state whether such a measure will be necessary.

Re 125: For the new certification of a specialist operation including the necessary documentation, 1.5 days or (12 h x EUR 52.40=) EUR 630 should be estimated. If one makes the assumptions in point 119, the costs for the new certification of specialist operations come to (12 000 x EUR 630=) EUR 7.6 million. Since these costs relate to the two-year certification period, annual costs arise at the level of EUR 3.8 million.

Re 126: For the engagement of the individual responsible for operation, a compliance cost of an hour per specialist operation is assumed. This results in a one-time compliance cost for all specialist operations of (12 000 h x EUR 52.40=) EUR 630 000 or EUR 315 000 per year.

Re 127: The display of certificates is estimated as requiring half an hour or (0.5 x EUR 32.80=) EUR 16.40 per specialist operation. This results in a total compliance cost of (12 000 x EUR 16.40=) EUR 197 000 in two years, and correspondingly EUR 99 000 per year.

Re 128: The costs for the organisation and conduct of the courses are included in the notes on No. 122. The costs of the courses per participant (EUR 1 500 costs of the course divided by 30 participants, see No. 122) are EUR 50 plus travel costs and loss of earnings. Since most courses are in the vicinity, the travel costs are set at EUR 100 and the loss of earnings at (8 h x EUR 52.40=) EUR 420. This results in a compliance cost of EUR 570 per trained staff member. There is no available information on the average number of staff of a specialist operation. If one assumes that three employees per year (including the person responsible for the operation) take part in a course, this results in annual costs per specialist operation of

approx. EUR 1 800. Totalling the further education of all specialist operations, compliance costs amount to EUR 21.6 million. The staff of specialist operations must also be given further training for other reasons and legislative provisions. Only a third is therefore allocated to the Ordinance on facilities for handling substances that are hazardous to water. This results in an **additional** compliance cost for all specialist operations of EUR 7 million per year and of approx. EUR 580 per year for each of the 12 000 specialist operations.

Re 129: Changes in the organisational structure of a specialist operation are relatively unusual. If one assumes that this applies each year to 10 % of the specialist operations, it results in a total of 1 200 notifications per year. If one estimates each notification as requiring one hour or EUR 32.80, it results in a compliance cost of EUR 39 000.

Re 130: The number of specialist organisations whose certification is revoked is negligible, so the return of certificates results in **no** significant cost.

Re 131: The proof of the specialist operation characteristic can e.g. be made by presentation of the certificate. In this case, the compliance cost is negligible. In the cases where the operator wishes for a copy, costs of EUR 1 per case arise. The number of these cases is unknown. The proof of the specialist operation characteristic is already required under state legislation, so the compliance cost does not change.

Re 132: The foreseen publication of all previously classified substances and mixtures will lead to a one-time cost of 2 working days in the Federal Environment Agency. This results in costs of (16 h x EUR 57.80=) EUR 925.

Re 133: Instructions resulting from a reclassification of substances hazardous to water were already foreseen in state legislation, but were the exception. No **additional** compliance cost thus arises.

Re Nos. 134 and 135: The regulations relate to existing facilities. No estimate can be made of the number of facilities which fail to meet the requirements of the Ordinance but met the requirements of the previous state legislation. The Federal Statistical Office states a total of 1 285 734 facilities for 2010, of which nearly 1.1 million facilities are fuel oil consumer installations which are already subject to mandatory inspection and therefore covered. There is no obligation to retro-fit these facilities if they do not have any defects.
Approx. 200 000 facilities out of those covered by the Federal Statistical Office can be allocated to industry. For these facilities, it is assumed on the basis of estimates from the Federal States, industry and the experts that between 2 and 5 % of the facilities deviate from the Ordinance on facilities for handling substances that are hazardous to water. This would mean that between 4 000 and 10 000 facilities in total fail to meet the new requirements of the Ordinance. A not insignificant part of these facilities are also already "in preparation", i.e. do not completely meet the existing state regulations. The latter facilities thus increase the compliance deficit. However, as in this case there are already agreements between the authorities and operators, this situation will not fundamentally change. The Ordinance however exempts the facilities in § 69(3 and 4) for which the Federal State regulations differ from the federal regulations. This is likely to be mainly pipeline facilities with WHC 1 substances, biogas facilities and facilities with gaseous substances hazardous to water. The corresponding assumptions appear in points 44, 62 and 63. These special cases will not be discussed further in what follows.

Re 134: The expert assessment to which this relates is required under the previous and future regulations, so causes no additional compliance cost. In addition to the usual testing, the expert shall also note in the report if the state legislation contains requirements deviating from the new Ordinance.
For the at most 10 000 facilities of industry, the cost of determining the legal deviation is estimated at a maximum of one working hour (EUR 52.40). Since the testing costs for a

complicated industrial facility may be approx. EUR 1 500 (cf. also here the deviating assessment of the expert), costs through the presentation of the deviations result of (7 000 x EUR 52.40=) a maximum of EUR 367 000 over 5 years (the testing cycle), or EUR 74 000 per year.

Re 135: It is not possible to state the frequency of instructions and the resulting costs for industry with respect to what is shown in points 44, 62 and 63. For an estimated 7 000 facilities, there may be deviations. Whether and over what period instructions will be issued and whether these were not already issued on the basis of the previous deviations cannot in the view of the Federal States be estimated. Since the value of these facilities already varies by a factor of 10 000 and it cannot be said what measures the responsible authorities will eventually require, no estimate is made of the costs, either for the authorities or for the measures to be taken by industry. Statements from the Federal States indicate that the measures resulting from an instruction may vary between around EUR 100 (e.g. for a check valve) to several million EUR (e.g. for protective measures against flooding). An average value cannot be given.

Preliminary comment on 136 to 142: The requirements for liquid manure and slurry installations or silage seepage facilities [Jauche-, Gülle- und Silagesickersaftanlagen - JGS-facilities] were hitherto based on the model LAWA ordinance on requirements for facilities for storing and filling of JGS-facilities from 2005 (unpublished), which according to the Federal State were either contained in the VAwS or laid down in a separate JGS ordinance.
No statement can be made on the specific technical equipment of the facilities since these facilities need not have been approved under water legislation (assessed for suitability) and there was no duty of disclosure. According to the agricultural census of the Federal Statistical Office in 2010, 142 300 operations had storage capacity for solid dung, 59 700 had storage capacity for liquid manure and 120 400 had storage capacity for slurry. The 120 400 operations with slurry had a total storage capacity of 128 million m3. There is no indication of the number of containers in which these volumes are stored. The Deutsche Bauernverband [German Farmers' Association] believes that there are, including all small facilities, 800 000 to 1 000 000 facilities for storage of solid dung, slurry, liquid manure and silage seepage.
According to information from the Federal Statistical Office, there were a total of 199 200 agricultural operations engaged in livestock farming in 2013 in Germany (Table 0210R, technical series 3, row 2.1.3). Of these, 125 200 operations were in the smallest group with up to 50 livestock units. A conversion of the livestock units into the resulting volumes of slurry or solid dung is only possible with difficulty. The de minimis regulation introduced by the Federal Council [Bundesrat], based on the volumes of slurry and solid dung, should however be of the same order of magnitude, that the main requirements of Annex 7 only apply to the remaining roughly 75 000 operations engaged in livestock farming.

Re 136: The basic requirements continue those of the LAWA. As for the other facilities, the planning of these facilities is now explicitly included. Since every new facility should be based on qualified planning, as with point 36 **no additional** compliance cost should be assumed.

Re 137: Leakage recognition systems were only required by LAWA in protected areas, though some Federal States have regulations which deviate from this. Industry assumes costs for a leakage detection system of a slurry container to be EUR 4 000 to 13 000, depending on the size of the facility. With an average operational life of a JGS container of 40 years, each year an estimated (75 000 operations: 40 years operational life) 1 900 slurry containers are freshly installed. The number of facilities in protected areas and those that are in Federal States in which this requirement already existed is not known. It is estimated that a quarter of all facilities fall into this category. This results in additional total costs of (1 450 x EUR 8 500=) EUR 12.3 million per year For existing facilities, retrofitting is usually impossible without changing the facility in such a way that it is equivalent to a new construction. Refitting

is therefore not required, so that costs only arise for organisational measures, the amount of which cannot be estimated. In principle, this will however lead to a reduction of the stated compliance cost of EUR 12.3 million.

Re 138: There has not previously been a duty of disclosure for JGS facilities. A notification is however only a statement of the type of facility (e.g. slurry container), the size, the form of construction and the safety features. The last two items of information is usually obtained by the operator from the supplier. To this extent, the workload should not exceed one hour per facility. For the new construction of facilities (cf. No. 137), there is a compliance cost of one hour of EUR 22.10 per facility or (1 900 x EUR 22.10=) EUR 42 000 for all undertaking per year. There is no duty of disclosure for existing facilities, so this also does not give rise to compliance costs.

Re 139: As there was until now no duty of disclosure, the facilities were basically not recorded by the authorities, although they were in part known to the authorities for reasons relating to construction or emission legislation or because of the Europe-wide Cross-Compliance Regulation. The inclusion of facilities in surveillance by the authority for new construction is set at 0.5 hours per facility. This results in a compliance cost for stocktaking of (1 900 x 0.5 h x EUR 27.10=) EUR 25 750 per year.

Re 140: The duties of the operator basically correspond to those which a farmer already has. No specific **additional** compliance cost can be identified.

Re 141: The inspection requirement before commissioning is new. The details of the inspection procedure are currently still being discussed as part of the development of Technical Regulations, so that firmly-based statements are not possible. If one assumes an inspection to cost EUR 750 as for other facilities, the 1 900 inspections to be carried out annually (see above) lead to a compliance cost of EUR 750 per undertaking, or EUR 1.4 million in total.

Re 142: There are no data on the age or condition of the JGS facilities. There is no basis for an estimate of how many facilities might deviate from the state regulations in force up to now and whether instructions will be issued for these facilities and what those instructions might require. It is therefore impossible to make an estimate of the compliance cost.

IX. Impact of the draft ordinance on sustainable development

The proposed ordinance is in keeping with the basic ideas of the Federal [German] Government regarding sustainable development in the context of the national sustainability strategy. The provisions envisaged for handling substances that are hazardous to water assist in the protection of water from the release of such substances and, as an expression of the precautionary principle, closely follow the sustainability principle. The sustainability principle of protecting living spaces is reinforced by the prevention of the contamination of water and soil. This contributes to maintaining species diversity. The ordinance makes an important contribution to this.

B. Specific Part

Re Chapter 1 (Purpose; area of application; definitions)

Chapter 1 regulates the purpose and area of application of the ordinance as well as definitions.

Re § 1 (Purpose; area of application)
§ 1(1) determines the purpose of the ordinance, namely the protection of bodies of water from qualitative deterioration through the release of substances that are hazardous to water from facilities for the handling of such substances. Experience has shown that considerable soil and groundwater contamination shall result in the absence of corresponding provisions. These effects are to be prevented by means of this ordinance.
The precondition for an operator applying the ordinance is that he operates a facility and that this facility handles substances that are hazardous to water. A facility in which the operator handles a substance that is hazardous to water must be designed and operated in such a way that, on the basis of the "duty of care" principle under § 62(1) of the Water Resources Act, human experience suggests that it is improbable that these substances that are hazardous to water can reach the soil or groundwater.

Paragraph 2 sets out 3 cases where the ordinance shall not be applied:

- when substances are to be handled which have been published as non-hazardous to water; these are those substances which have been published in Federal Gazette No. 142a in accordance with the administrative provision concerning substances that are hazardous to water 2005, those which have been reclassified in the interim by the Commission for the evaluation of substances that are hazardous to water and those which, in future, shall still be classified as non-hazardous to water and published as such; to avoid legal uncertainties, all these substances that are non-hazardous to water shall be announced by the Federal Environment Agency with the entry into force of the ordinance and thereafter at regular intervals in the Federal Gazette and can also be researched on the website of the Federal Environment Agency; a mixture of substances that are non-hazardous to water does not constitute a water pollutant in this regard either,
- when substances that are hazardous to water are handled in mobile facilities, i.e. in motor vehicles, and
- when substances that are hazardous to water are stored in the subsoil in accordance with § 4(9) of the Federal Mining Act; the provisions of this ordinance may not be applied to this form of underground storage since, for example, the stored media cannot be enclosed in the subsoil from a technical viewpoint; aboveground facilities which are subject to mining law are, however, not exempt from the area of application of Chapter 3.

Paragraph 3 introduces a *de minimis* rule with a view to reducing bureaucracy. Facilities above ground up to 220 litres or 200 kilograms outside protected areas and defined or temporarily secured flood plains are exempt from the ordinance. The technical requirements, obligations to disclose and other obligations under this ordinance shall therefore not apply to the operators of these facilities. However, the "duty of care" principle still applies to these facilities under sentence 2, as well as the principle of the best possible protection of bodies of water under § 62(1) of the Water Resources Act, even where no special technical and organisational measures are required by the ordinance. This *de minimis* rule also does not mean that the amounts indicated are unimportant. The release of a substance that is hazardous to water from a small facility is just as significant as the release of the same amount from a facility subject to the ordinance. According to sentence 3, the small facilities indicated also do not require a determination of suitability under § 63(1) of the Water Resources Act. The introduction of a *de minimis* rule of this type responds to the frequently expressed wish that such facilities should be free from official control of any kind and the

operator should be made responsible for the observance of the "duty of care" principle and the best possible protection of the bodies of water. The *de minimis* rule also relieves the competent authorities of any control work, unless substances that are hazardous to water escape or ground or water pollution occurs.

Paragraph 4(1) continues an implementation practice in the Federal States, which, however, had not been standardised previously. Enterprises repeatedly find that the question is posed as to whether they are operating a facility for handling substances that are hazardous to water. This question arises, for instance, when objects are handled that are not hazardous to water, but also occasionally in connection with those objects which are classified as being hazardous to water. This may be the case, for example, in the case of a facility where mainly packages or items are handled that fall outside the area of application of the ordinance (books, clothes, small devices, games, foodstuffs), but which occasionally handles a package containing substances that are hazardous to water (e.g. perfume) or an item is accepted which contains a substance that is hazardous to water. In a case of this kind, it is justified on the basis of proportionality to introduce a kind of *de minimis* rule, so as to avoid the exceptional case of the presence of substances that are hazardous to water leading to an entire storage depot needing to be equipped with a sealing surface that is impermeable to liquid. This exemption can, however, only apply when the share of substances that are hazardous to water in the total of substances present is negligible. This proportion may also only be negligible when the overwhelming majority of the components of the operation are non-hazardous to water and that this is not only the case for limited periods, but maintained throughout the entire planned period of operation in this form. For a facility where the share of substances that are hazardous to water is considered to be negligible as defined above, these substances that are hazardous to water need not be classified.
As soon as substances that are hazardous to water are regularly handled or the operation, e.g. through public presentation, is designed to handle substances that are hazardous to water as well, a correspondingly equipped special area may be established for this regularly occurring share which complies with the requirements of the Ordinance on facilities for handling substances that are hazardous to water. The provisions of this ordinance apply to transport services or comparable commercial establishments that are specialised in handling substances that are hazardous to water or which offer the handling of hazardous goods or substances that are hazardous to water.
The exclusion provision under paragraph 4 shall not be effective either if, for example, a drum and container storage facility is operated in which drums and containers which are not covered by the ordinance are stored intermittently. This condition shall only exist for some periods and not at all for the entire storage period. Since substances that are hazardous to water are stored at other times, the warehouse is subject to the ordinance. Thus, the share of substances that are hazardous to water must be negligible at all times.
Under sentence 2, the operator can ask the competent authority to decide whether a facility falls under the ordinance. This should ensure that despite the use of the undefined legal concept "negligible" in sentence 1, the regulation satisfies the constitutional need for normative clarity. The required legal certainty in the identification of *de minimis* cases can be ensured in view of the variety of conditions relating to the envisaged official decision in individual cases under sentence 2, which can be invoked by the operator if he wishes to obtain certainty about the applicability of the ordinance to his facility.

Re § 2 (Definitions)
§ 2 defines the terms that are of particular importance to the ordinance. The definitions largely correspond to those of the Model administrative instruction concerning substances that are hazardous to water.

Paragraph 2 draws on the definition of substances that are hazardous to water in § 62(3) of the Water Resources Act, according to which the decisive criterion is the tendency of these substances to affect the quality of the water adversely. The definition further specifies this description in that scientific substances and mixtures should be understood under the

general concept of “substances that are hazardous to water,” irrespective of their aggregate condition. It was stated in the explanatory statement to the Water Resources Act (*Bundestag* printed paper 16/12275 of 17 March 2009, p. 71) that the term “substances that are hazardous to water” covers substances and preparations within the meaning of the Chemicals Act and includes mixtures and waste. These substances that are hazardous to water must be classified in a water hazard class as per the rules in Chapter 2 Section 2, although the outcome may be that a substance or mixture is not hazardous to water or is regarded as being generally hazardous to water in accordance with this section. A missing classification shall not result in a substance or mixture being regarded as non-hazardous to water. Under § 3(4), this substance or mixture shall even be regarded as highly hazardous to water. The classification of substances that are hazardous to water into water hazard classes is the basis for determining requirements for the facilities proportionate to the risks. The water hazard classes only apply in the law of handling substances that are hazardous to water and should not be used when the effects of these substances on the environment are assessed.

Paragraph 3 adopts in relation to substances the corresponding definition under the Chemicals Act (§ 3 sentence 1 point 1 of the Chemicals Act). For ease of understanding, no reference is made, so that it becomes immediately apparent that the substance concept used in the ordinance does not mean that chemically pure substances are being considered (for analysis purposes), but that a certain degree of admixtures and impurities are accepted. Thus, petrol is defined under European law as a substance, although from the chemical viewpoint it is clearly a mixture.
The definitions under paragraphs 2 and 3 do not include the concept of the product in accordance with § 3 sentence 1 point 5 of the Chemicals Act. The definitions in paragraphs 2 and 3 should, in this sense, be interpreted narrowly in terms of the Chemicals Act.

Paragraph 4 determines that mixtures consist of two or more substances. For these mixtures, it is unimportant whether these substances have been actively mixed. The mixtures include waste which regularly consists of several substances. The intention to dispose of these mixtures is irrelevant to the question of whether this may lead to a danger of water pollution.

Since the aggregate condition of substances is highly significant for their water pollution potential and, hence, also for the requirements to be imposed, paragraphs 5 to 7 define gaseous, liquid and solid substances on the basis of definitions under European chemicals law (Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006 (OJ L 353 of 31 December 2008, p. 1). The decisive consideration for assignment to an aggregate condition is its characteristics under normal conditions. If certain substances are handled by a facility at higher temperatures for technical procedural reasons, this condition is not decisive.

Paragraph 8 defines fermentation substrates of agricultural origin for the production of biogas. The concept is used in connection with facilities for producing biogas. The definition follows that of instruction sheet 907 published by the German Association for Water, Wastewater and Waste. “Erzeugung von Biomasse für die Biogasgewinnung unter Berücksichtigung des Boden- und Gewässerschutzes” [“Generation of biomass to produce biogas, taking into account the protection of land and bodies of water”], from April 2010, and describes the initial materials for which distribution after fermentation is also possible in sensitive areas under certain circumstances. Included in fermentation substrates of agricultural origin are plants and parts of plants which are harvested directly from the field or from activities in forests, horticulture and countryside management, as well as the residues that arise through the handling or processing of agricultural products. No substances that are hazardous to water, such as extraction agents, may be added in this process. In addition, the

hazardous state of the residues may not be increased. This would be the case, for example, in the case of thermal processes if toxic by-products are created. However, if the residues germinate or result from biochemical processes of fermentation products, the hazard level does not usually increase. The provision allows a degree of flexibility, but refers in its essence to the hazard level within the meaning of § 3(1).

As in § 1(1) sentence 1 of the Model administrative instruction concerning substances that are hazardous to water, paragraph 9 sentence 1 defines, in the first instance, a facility as independent and of fixed location or a unit used at a fixed location which fulfils one of the functions identified in the Water Resources Act: i.e. storage, drawing off, handling, manufacturing, treatment or use (point 1), as well as transport in pipelines within a work site (point 2). Units that can only fulfil one of these functions in combination with other units, such as pumps, holding tanks or expansion tanks, or those that are freely movable, such as motor vehicles powered by petrol or diesel, are not facilities within the meaning of the ordinance, though they may form a fixed part of a facility. All non-independent parts of a facility from which substances that are hazardous to water may escape directly, or through subsequent delivery from other parts, belong to a unit. Only those facilities that are used for a certain operational purpose at one location for more than half a year are considered under paragraph 9 sentence 2 as units of fixed location or used at a fixed location. Both preconditions must be fulfilled in this regard. An operational purpose exists if a defined and unchanged task is fulfilled by one facility. Only when this task is maintained for more than half a year is this facility included in the facility concept. Building site containers or building site tanks which change their location as the work progresses, and which are correspondingly operated in a changing operational context, are not usually included in the facility concept. The storage of reject batches from production operations which are filled in drums or containers and then disposed of do not count towards facilities within the meaning of the ordinance, since such containers usually only contain these reject batches for a few days.
Paragraph 9 sentence 2, clause 2 stipulates that a facility may be subdivided and then comprise several plant parts. A facility to store substances that are hazardous to water may therefore, for example, consist of the two plant parts of a single-wall storage container and a collection pan.
The basic requirement for the presence of a facility within the meaning of this ordinance is that it is used for the purpose of handling substances that are hazardous to water, i.e. storing, drawing off, handling, manufacturing, treating or using these substances. This is naturally the case with a tank in which, for example, fuel oil or petrol is stored. A machine for the production of ice cream, which is regularly cleaned with disinfectant and in which substances that are hazardous to water affect the contents for a certain time, does not, however, thereby become a facility for handling substances that are hazardous to water. A supermarket which mainly sells foodstuffs but which also offers several washing and cleaning materials is also not a facility for handling substances that are hazardous to water (§ 1(4)).
Facilities within the meaning of the ordinance must handle substances that are hazardous to water in the course of their operation. The use of a substance that is hazardous to water, e.g. a coating to cover foundations, does not turn this building into a facility for handling substances that are hazardous to water since, in the operation of the structural facility itself, these substances that are hazardous to water are not handled.

The concepts of drum and container storage facilities in paragraph 10 describe a storage facility in which mobile contents make up no more than a maximum volume of 1 250 litres. The total volume of the substances that are hazardous to water in all containers together is irrelevant. The definition serves to be able to foresee special requirements for these facilities.

The definition of “fuel oil consumer installations” in paragraph 11 specifies in detail the facilities in which liquid substances that are hazardous to water are used for the purpose of utilising their energy characteristics, thereby advancing the corresponding conceptual

definition in § 2(13) of the Model administrative instruction concerning substances that are hazardous to water. In particular, EL fuel oil, liquid triglycerides (vegetable oil) and liquid fatty acid methyl esters are substances that are hazardous to water which are relevant to this use. The assignment to a fuel oil consumer installation is made according to its annual usage not exceeding 100 m³ and the frequency of refilling, which is determined as no more than four times a year. This includes typical private fuel oil consumer installations, but not commercially driven facilities for electricity or heat production. However, for private fuel oil consumer installations, it should be noted that under § 62(1) sentence 1 of the Water Resources Act, only facilities for the use of substances that are hazardous to water for commercial purposes and in public buildings fall under the "duty of care" principle. This means for the private operator that only his fuel oil tank is subject to the requirements of the ordinance, not the burner. Fuel oil consumer installations make up the numerically largest part of the facilities regulated by the ordinance. Partly simplified regulations are applied to them, particular with regard to the areas for drawing off (see § 33), since, in view of the limited usage, requirements pertaining to the areas for drawing off would be disproportionate. These facilities are similar to emergency power systems, since these facilities, too, can be assumed to be relatively little-used and somewhat less frequently refilled. No requirements are imposed in relation to the substances used in emergency power systems.

Paragraph 12 introduces the concept of the petrol station for own consumption. Especially in agriculture, but also in transport companies, for example, such petrol stations are used for their own motor vehicle fleet and have been allowed in most Federal States for years, sometimes under special conditions. The definition closely follows that given in the Technical Rule concerning substances that are hazardous to water in worksheet ATV-DVWK-A 781 entitled " Tankstellen für Kraftfahrzeuge" ["Petrol stations for motor vehicles"], publication date; August 2004, published by the German Association for Water, Wastewater and Waste. This definition is extended by the annual usage of 100 000 litres at this petrol station, which is derived from the experience of implementation in the Federal States.

Paragraph 13 defines facilities for storing and drawing off liquid manure, slurry and silage seepage along with similar substances which accumulate in agriculture, so-called liquid manure and slurry installations or silage seepage facilities. In accordance with § 62(1) sentence 3 of the Water Resources Act, the best possible protection for bodies of water from detrimental changes to their characteristics shall apply to these facilities. This definition is designed to end the debate regarding the difficulties frequently encountered as regards implementation. In addition to the liquid substances of liquid manure, slurry and silage seepage, solid substances are also included in the concept of comparable substances arising in the agricultural sector in § 62(1) sentence 3, where silage with water-polluting characteristics can accumulate. It is therefore logical to refer back to the corresponding definitions in § 2(1) of the Fertiliser Act and include commercial fertiliser, including solid fertiliser. However, to circumvent the regulatory gaps compared with the Fertiliser Act, the range of substances to be covered must thereby be extended to include fertiliser from non-agricultural sources (point 3), for instance manure from pony stables. In addition, silage or ensiled material must be included if silage seepage accumulates. These terms should, in particular, be understood to include plant-based biomasses from agricultural development and production, plants and elements of plants that arise from agricultural, forestry or horticultural businesses or within the framework of countryside management, if it is open to fermented fodder during storage and where silage seepage may accumulate during this process.

In paragraph 14, the individual facilities which come under the generic term "biogas facilities" in the ordinance are listed. The entire process is covered here, from the storage of the fermentation substrates to the storage of the fermentation residues using the containers required for these process steps. The concept "biogas facilities" therefore includes all the storage facilities listed under points 1 to 3, the associated facilities for drawing off and the containers for fermentation, including the associated facilities.

Under no circumstances, however, is every facility used to store fermentation substrates or residues part of a biogas facility. Instead, facilities used to store fermentation substrates or residues can only then be regarded as an element of a biogas facility if this is justified on the basis of the functional and spatial link between these facilities. It is essential in this regard to focus on the operator of the biogas facility. Even if the operator purchases from a third party more of a substance that is hazardous to water to be used in the operation of the biogas facilities, this third party does not become a biogas facility operator. Fermentation residue stores which are remote from a biogas facility and which, for example, serve other agricultural enterprises as an interim storage facility prior to application on their fields, are not part of a biogas facility, since these fermentation residue stores do not have any spatial or functional link to a biogas facility.
Above all, those facilities used to store fermentation substrates where the substrates are not intended to be used in a biogas facility do not constitute part of a biogas facility. In the case of fermentation substrates and residues which accumulate in agriculture, these are "similar substances which accumulate in agriculture" within the meaning of § 62(1) sentence 3 of the Water Resources Act.
Biogas facilities are both facilities which handle fermentation substrates of agricultural origin in accordance with § 2(8) and to which a particular safety level applies (cf. in particular § 38), as well as those in which all other fermentation substrates are used and for which the provisions of the ordinance apply without exception.

The definition of underground facilities in paragraph 15 represents a further development in the corresponding definition under § 2(3) of the Model administrative instruction concerning substances that are hazardous to water. In the first clause, the implementation process consequently determines that a facility is considered to be underground if part of it is situated underground. This addition is important because the requirements in the ordinance are aimed at the facility. Hence, underground facilities, for example, are subject to inspection to a greater degree (cf. Appendices 5 and 6). Sentence 1 clause 1 makes it clear that the entire facility is then to be inspected, not only the underground parts. A differentiation between the facility inspections according to plant parts would lead to increased bureaucracy and make it significantly harder to comply with this obligation. The concept “underground” relates to the primary barrier of the facilities, i.e. those parts of a facility which enclose the substances that are hazardous to water directly and in accordance with regulations. However, it was insufficiently clear in the previous formulation of the Model administrative instruction concerning substances that are hazardous to water that – in addition to the parts directly buried in the ground (sentence 1 point 1) – plant parts not directly accessible or controllable such as pipelines in the cellar foundations which are connected with the earth must also be considered as underground (sentence 1 point 2). In the event of a leak in these plant parts, the substances that are hazardous to water would be released into the ground, because the construction parts in which they are located have no retention function. Clarifying the Model administrative instruction concerning substances that are hazardous to water, it is therefore added to sentence 1 point 2 that those plant parts which cannot be viewed in their entirety, but which are contained in building parts that are in immediate contact with the ground, are also underground. On account of the lack of visibility, leaks may not be recognised, depending on the construction. However, plant parts relating to secondary security, such as a drain pipe from a sealing surface, as well as the bases of flat-bottomed containers, do not constitute underground sections of the facility (sentence 2 clause 2). Areas on which, for example, solid mixtures that are hazardous to water are stored in the open or silos with solid fermentation substrates or ensiled material are also above ground, since these areas can at least be inspected for leaks from above, provided no substances that are hazardous to water are stored there.

Paragraph 16 defines what is meant by retention systems. The concept is a general term for secondary safety installations of facilities. These sections of the facility should always be impermeable to liquids (see § 18(2)) as only this is sufficient for the "duty of care" principle (§ 62(1) of the Water Resources Act) and for ensuring that no substances that are hazardous

to water are released from the facility. The definition is taken from the existing Technischen Regeln wassergefährdende Stoffe Arbeitsblatt DWA-A 779 [“Technical Rules concerning substances that are hazardous to water in worksheet 779 published by the German Association for Water, Wastewater and Waste”]: Allgemeine technische Regelungen [“General Technical Regulations”], publication date: April 2006.

Paragraph 17 determines what is meant by double-walled facilities, since enforcement has repeatedly given rise to debate. The definition is derived from Arbeitsblatt DWA-A 779: Allgemeine technische Regelungen [“General Technical Regulations”], publication date: April 2006.

The definition of areas for drawing off and handling in paragraph 18 is derived from the Technical Rules concerning substances that are hazardous to water in Arbeitsblatt DWA-A 781: Anforderungen an Tankstellen [“Requirements pertaining to petrol stations”], publication date: August 2004.

According to the definition of pipelines in paragraph 19, these serve to transport substances that are hazardous to water, in particular when filling and emptying other facilities. Pipelines include the plant parts that are required for their normal operation, such as fittings, flanges and sealants. The definition also helps to distinguish from long-distance pipelines.

The definitions of the terms “storing,” “drawing off,” “handling,” “manufacturing,” “treating,” “utilising,” “establishing,” “maintaining” and “decommissioning” in paragraphs 20 and 22 to 30 describe the activities in relation to which the requirements specified in the ordinance are imposed and which have been taken over largely unchanged from the Model administrative instruction concerning substances that are hazardous to water. The term "storage" (paragraph 20) does not cover deposition, i.e. the deposition of substances or mixtures in order to get rid of them, for example, on landfills. Special legal provisions shall apply to such activities.

Paragraph 21 inserts a definition of ground basins for the storage of liquid manure, slurry and silage seepage as regards which the Deutsche Institut für Bautechnik ([“German Structural Engineering Institute”] DIBT) has issued a general building inspectorate approval to several applicants in respect of their systems.

In paragraph 24, the concept of “intermodal transport” is redefined. The definition adopts terminology from the transport business. The decisive feature of inter-model transport is that the goods are transported in one loading unit or one vehicle (e.g. one truck trailer) by different means of transport, i.e. by ship, rail or road and that the loading units are not opened during handling. This means that the transporter has no access to the goods being transported, i.e. the substances that are hazardous to water, and cannot assess them himself. In this respect, the goods themselves are not being handled, but rather the loading units. The concept is only used in cargo-handling facilities and distinguishes the cargo-handling facilities of intermodal transport, in which the loading units are transferred from one transport means to another, from all the others, in which the loading units are transferred between the same type of transport means (in particular street vehicles).

The definition of “significant changes” in paragraph 31 draws on the administrative provisions of the Federal States and the operational safety ordinance. An important change of characteristics occurs when e.g. a single-wall container in a collection tray is replaced by a double-wall container with a leak detection device. This leads to both structural and safety-related changes. However, there is no important change in characteristics if, for example, a pump is replaced by a new pump with comparable technical characteristics.

The definition of protected areas in paragraph 32 corresponds to § 2(11) in the Model administrative instruction concerning substances that are hazardous to water. It has been

extended by the qualitative protected zone limitation in the case of water protection areas (sentence 2 final clause), which is important for some Federal States.

Paragraph 33 determines that experts are only recognised if they have been authorised by recognised expert organisations on the basis of this ordinance.

Re Chapter 2 (Classification of substances and mixtures)

Chapter 2 contains the substance-related requirements to determine the risk to water as a prerequisite for the facility-specific measures to protect bodies of water from adverse changes to their characteristics that are regulated in Chapter 3.

Re Section 1 (Basic principles)

Section 1 regulates the principles concerning the classification of substances and mixtures into water hazard classes or as non-hazardous to water as well as the determination as being generally hazardous to water.

Re § 3 (Basic principles)
§ 3(1) regulates the principle that substances and mixtures which are handled in facilities should be classified as non-hazardous to water or assigned to a water hazard class.

The current practice is maintained of classifying substances and mixtures into one of three water hazard classes (WHC): highly hazardous to water, obviously hazardous to water, slightly hazardous to water or non-hazardous to water. The expression “obviously hazardous to water” for substances in WHC 2 is introduced as a clear distinction to the term “substance that is hazardous to water,” which is used for all substances that are hazardous to water, irrespective of the water hazard class. By contrast, the previous descriptions of water hazard classes 1 and 3 remain unchanged.

Paragraph 2 introduces the concept of “substances that are generally hazardous to water” and describes it in more detail. Substances that are generally hazardous to water are those where the water hazard characteristic is undisputed, but where no classification into a water hazard class is to be effected and the regulator shall lay down a concluding provision. This concept responds to a frequently expressed wish from business for certain mixtures not to have to undertake a classification because of the work required and the changing composition.
Under sentence 1 points 1 to 5, the substances from the agricultural sector that are considered generally hazardous to water are listed. In addition to the liquid substances (liquid manure, slurry and silage seepage), solid substances are also included in the definition of comparable substances accruing in the agricultural sector in § 62(1) sentence 3 of the Water Resources Act. Silage seepage which has water-polluting characteristics can accumulate in connection with these solid substances (point 5). It is therefore logical to refer back to the corresponding definitions in § 2(1) of the Fertiliser Act and include commercial fertiliser, including solid fertiliser. However, to circumvent the regulatory gaps compared with the Fertiliser Act, the range of substances to be covered must thereby be extended to include animal excrement from non-agricultural sources (point 3), for instance manure from pony stables. In addition, silage or ensiled material must be included if silage seepage accumulates. These terms should, in particular, be understood to include plant-based biomasses from agricultural development and production, plants and elements of plants that arise from agricultural, forestry or horticultural businesses or within the framework of countryside management, if it is open to fermented fodder during storage and where silage seepage may accumulate during this process.
Under sentence 1 point 6, these substances that are generally hazardous to water, as referred to in points 1 to 5, are supplemented by the fermentation substrates of agricultural

origin for producing biogas where a similar composition can basically be assumed and where a further classification appears similarly inappropriate.
Sentence 1 point 7 includes floating liquid substances as well as mixtures that only consist of these. These are substances which, while they satisfy all the criteria for classification as non-hazardous to water, nevertheless float in water due to their physical characteristics. Through floating on the surface, these substances can harm water organisms, insects and birds, for example by suppressing their oxygen intake or their mobility. Consequently, these substances must be regarded as generally hazardous to water in view of the possible contamination of an aboveground body of water. The only floating liquid substances included are those which have been identified as such by the Federal Environment Agency.
In accordance with sentence 1 point 8, solid mixtures are also determined as being generally hazardous to water. The exclusion of the solid mixtures from the requirement for self-classification is made in particular with regard to the solid waste arising everywhere in the economy. As business has argued, a systematic implementation of the otherwise applicable classification requirement would lead to considerable bureaucratic cost and delays in disposal. The regulation here serves the avoidance of these undesirable effects and is very easy to implement in practice. In § 10, the operator is given the opportunity to classify solid mixtures differently. This provision is not affected. Mixtures that are included in the list of substances that are non-hazardous to water which is published by the Federal Environment Agency do not need to be reassessed. Under sentence 2, they are considered non-hazardous to water without further investigation. These mixtures include, for examples, metals, if they are solid, not in a colloidal solution and do not react to water or oxygen. Oxidising iron is also therefore classified as non-hazardous to water, while the elementary metal sodium, which reacts intensely with water, is not.
Natural materials such as minerals, sand, wood, coal, cellulose, glasses and ceramic materials as well as plastics are also not substances that are hazardous to water insofar as they are solid, not dispersed, not soluble in water and indifferent. This list of substances that are non-hazardous to water was extended compared to that published in the Federal Gazette in 2005 by further substances, including blast furnace slag and steelworks slag from the Linz-Donawitz process. All substances and mixtures classified as non-hazardous to water are published in accordance with § 67 on the website of the Federal Environment Agency and in the Federal Gazette, and can be researched on the webpage of the Federal Environment Agency.

The fictitious belief that all solid mixtures should be regarded as generally hazardous to water is weakened, by way of deviation from sentence 1 point 8, and, in addition to sentence 2, by sentence 3, since the solid mixtures shall especially not be regarded as generally hazardous to water if, on account of their origin or composition, it can be assumed that they are not able to exert a negative impact on the water quality. Frequently occurring mixtures such as rocks, floors, sawdust, plastic packaging, glass, paper and also herbs and beeswax do contain analytically demonstrable amounts of substances that are hazardous to water, but the amount of these substances that are hazardous to water will not usually be plausibly assessed to be sufficient to adversely affect the water quality, if the origin of the mixture or its composition do not give reason to suspect water pollution. An analysis of the exact composition of a solid mixture with an indication of the shares of each substances contained in the mixture is in this case not required. This also applies to the case that the substances referred to above are waste, insofar as this is not evidently or even deliberately polluted by other substances that are hazardous to water. Some of the examples mentioned can in any case already be classified under specific groups defined by the Federal Environment Agency as non-hazardous to water. This classification provides security for the user, but is not absolutely required. If there is no indication that a solid mixture may lead to pollution of the soil or groundwater as a result of the substances it contains, it should not be regarded as generally hazardous to water. To this extent, a facility that is designed to handle such mixtures cannot be described as a facility to handle substances that are hazardous to water. A facility to store used glass, used paper or wood remains is therefore not to be considered a facility to handle substances that are hazardous to water, even if it contains

occasionally erroneous deposits or the used wood has colour residues. However, it should be clear that containers with timbers that have been treated with wood preservatives may lead to considerable contamination if the wood preservative is washed out. These timbers should therefore be considered as substances that are hazardous to water within the meaning of § 3(2) sentence 1 point 8.

In accordance with paragraph 3, substances and mixtures which are designed to be ingested, or which can be expected to be ingested as foodstuffs, as well substances and mixtures which are intended for animal feed, with the exception of ensiled material and silage where silage seepage can accumulate, shall be regarded as non-hazardous to water, since a classification of foodstuffs into water hazard classes would be difficult to place with the general public. Thus, for example, beer, wine and juices with the addition of ascorbic acid (vitamin C) are not considered to be substances that are hazardous to water. For food that is not considered to be hazardous to water, the essential fact is not that it is consumed in exactly this form or whether and how it has been processed. The maize grains from which popcorn is made, the grape juice which is fermented to wine and the sugar beet from which sugar is extracted can also be considered as foodstuffs. The classification as substances that are non-hazardous to water only applies, however, to food that is consumed by people or animals and not to the substances and mixtures which are deliberately added during the production of food and its processing and preparation. The phosphoric or ascorbic acid that is used in the preparation of soft drinks, for example, is itself a substance that is hazardous to water that is handled in a facility. Both substances are added and not consumed as such, so that the containers with these substances are facilities under the Ordinance on facilities for handling substances that are hazardous to water. Correspondingly, table salt intended for consumption is considered non-hazardous to water, while de-icing salt, which is largely similar from a chemical viewpoint, should be classified in a water hazard class. If substances that are also contained in food, such as ethanol, are also used for other purposes, such as for cleaning, they must also be classified in water hazard classes. Point 2 includes all substances or products which are intended as animal fodder having been processed, or processed in part or which have not been processed. Ensiled material and silage where silage seepage can accumulate would consequently also be covered but would be regarded as generally hazardous to water on the basis of the provision in § 62(1) sentence 3 of the Water Resources Act (paragraph 2 sentence 1 point 5). The remarks relating to the substances and mixtures added in the case of foodstuffs shall apply to animal feed accordingly.

As long as no decision on the classification of a substance has appeared in the Federal Gazette or a classification of a mixture has been documented to a competent Federal State authority, the water hazard class for this substance or mixture as per paragraph 4 is “highly hazardous to water.” By means of this provision, which already complies with existing practice, due account is taken of the "duty of care" principle (§ 62(1) of the Water Resources Act).

Re Section 2 (Classification of substances and documentation; decision on classification)

Section 2 regulates the classification of substances, the documentation of this classification and the procedure to decide upon the classification. Section 3 lays down corresponding regulations for mixtures. This distinction of regulation for substances and mixtures is intended to ease comprehension.

Re § 4 (Self-classification of substances; exceptions; documentation)

§ 4 regulates the duty of the operator to undertake self-classification of substances that were already previously regulated in the administrative provision concerning substances that are hazardous to water.

Paragraph 1 obliges the operator of a facility for handling substances that are hazardous to water to classify the substances contained or used in the facility in one of the water hazard classes specified in § 3(1) or as non-hazardous to water. The classification in water hazard classes or as non-hazardous to water is derived from the characteristics of the substance according to Appendix 1. The data required to derive the water-polluting substance characteristic must be known to the operator on the basis of other valid legal regulations of substances or chemicals. The decisive factor is the characteristics of the substance in the condition that they enter a facility. Reactions within the facility, in particular in manufacturing, treatment or usage facilities, are not taken into account.
Paragraph 1 only obliges the operator to self-classification of substances. However, if a manufacturer, distributor or another company wishes to classify the substances that he sells, for example for commercial reasons, this is not excluded by the wording of paragraph 1.

The obligation for self-classification does not apply, according to paragraph 2, if a substance has been determined by the order as generally hazardous to water (point 1), has already been published in the Federal Gazette with its classification (point 2) or a substance is already covered by a published substance group classification (point 3). These regulations allow reference to existing classifications and thereby contribute to the avoidance of unnecessary duplication. Point 4 enables the operator to consider a substance highly hazardous to water (WHC 3) regardless of its characteristics. This regulation may be helpful to an operator who wishes to avoid any discussion of the substances that he uses and is ready to operate his facility on the safe side. This regulation naturally applies only to his facility and does not constitute a classification of the substance. Point 5 provides a special provision for handling facilities and releases the facility operator from the obligation to determine the substances that are hazardous to water in the containers or loading units. The operator is unable to make a corresponding classification since he is not allowed to open the container. As regards a decision on the water hazard, the identification under hazardous goods law can be emphasised.

Paragraph 3 requires the operator to document the data used by him for the self-classification in a specified form. The use of the form is to make it easier for the operator to indicate all required data and to simplify the analysis by the Federal Environment Agency. The volume of data in the case of classification as non-hazardous to water is larger than for the classification of substances that are hazardous to water, since with the classification as non-hazardous to water, the appendices in which these substances are used are completely removed from the other regulatory area of the ordinance.
The documentation concerning the classification of substances must be forwarded to the Federal Environment Agency so that it can check the documentation (see § 5(1)) and decide on the definitive classification (see § 6(1)). In this way, it is ensured that the operators carry out self-classification correctly and that comprehensible and reliable classification decisions can be published.

Paragraph 4 gives the operator in certain cases the option to establish the water pollution risk of his substance different from the criteria set out in Appendix 1 and to submit a different classification proposal to the Federal Environment Agency with corresponding evidence. Reasons for a different classification can include the fact that the data and toxicity characteristics on which the normal classification is based are not applicable in view of a possible risk to the surface water or groundwater.

Re § 5 (Inspection and verification of the documentation; substance groups)
The instrument of self-classification requires an official quality control, which is regulated in § 5.

Paragraph 1 obliges the Federal Environment Agency to check all the information documented according to § 4(3) and (4) for its completeness and plausibility. These checks are to ensure that the requirements of Appendix 1, for example, the points assignment for the

risk phrases, are completely fulfilled by all operators. The Federal Environment Agency is authorised to supplement or correct any missing or erroneous information from the operator (sentence 2).

Paragraph 2 sentences 1 and 2 further obliges the Federal Environment Agency to take samples to check the self-classification in detail, going beyond the documented information. For this purpose, for example, the derivation of the risk phrases or the inclusion of scientific studies may be examined. In these cases, the operator is required, at the request of the Federal Environment Agency, to also supply the documentation forming the basis for the evaluation (sentence 3),

Paragraph 3 makes it clear that the Federal Environment Agency also has the option to bring substances together in substance groups and to classify these substance groups. This option should be reserved for the Federal Environment Agency, so that the definition of a substance group is scientifically unambiguous, comprehensible and compatible with European substance law. It remains open to an operator to make corresponding proposals.

Re § 6 (Decision on classification; publication in the Federal Gazette)
§ 6 regulates the decision of the Federal Environment Agency on the classification of a substance or a substance group and the publication of this decision.

The binding decision on the classification of substances for which the operator has documented a self-classification and on substance groups is made by the Federal Environment Agency (§ 6(1)). It makes a decision based on the outcome of the checks under § 5(1) and (2). In accordance with paragraph 1 sentence 2, the decision of the Federal Environment Agency takes account both of the results of the checks under § 5 and also own knowledge or assessments, as well as opinions from the Commission for the assessment of substances that are hazardous to water. The self-classification of the operator is only officially valid after the decision of the Federal Environment Agency and notification to the operator, allowing the planning, construction and operation of a facility. A delay in planning and construction is not anticipated since the decisions should be able to be made quickly on the basis of correct documentation from the self-classification.

Under paragraph 2, the Federal Environment Agency also has the option to assign classifications to substances or substance groups on the basis of its own knowledge without a self-classification by the operator.

Paragraph 3 obliges the Federal Environment Agency to inform the operator of the decision on the classification of a substance according to paragraph 1 sentence 1. This gives the operator the option to appeal the classification. In this way, legal certainty is raised considerably compared with the current state of affairs.

Under paragraph 4 sentence 1, the Federal Environment Agency also announces the decisions on the classification of substances and substance groups according to paragraphs 1 and 2 in the Federal Gazette in the form of a general ruling within the meaning of § 35 sentence 2 of the Act on administrative procedures, against which an appeal can be lodged with the Federal Environment Agency. Independently on this, the Federal Environment Agency will provide a search function on the web in accordance with sentence 2 to allow the water hazard class of individual substances to be queried directly. The "Rigoletto" system on the webpage of the Federal Environment Agency already provides a corresponding opportunity nowadays. This information will thereby be freely available to every operator, so that the duty of self-classification of the same substance or a substance belonging to the same substance group for use in another facility falls away. No information on personal data are given by any of these forms of publication, so no data protection regulation is needed.
Central documentation is appropriate, since it is possible to make a generally applicable,

binding and unambiguous classification according to the criteria specified in Appendix 1 and also a binding publication without infringement of data protection. Against this background, it is correct to envisage the Federal Environment Agency continuing in the future as the central documentation office for the classification of substances that are hazardous to water. This means that the operator only needs to consult the published list from the Federal Environment Agency in the Federal Gazette to find the water hazard class of a substance. If the substance is not listed there, it has not yet been classified and is still subject to the obligation for self-classification. This approach prevents duplicate assessment.

Re § 7 (Changes to existing classifications; duty of notification)
Paragraph 1 obliges the Federal Environment Agency to make a new assessment of a substance and to publish any change in classification if it has corresponding evidence.

If an operator has information that might lead to a change in classification, paragraph 2 obliges the operator to provide this information to the Federal Environment Agency. On the basis of this information, the Federal Environment Agency, if necessary under paragraph 1, shall make a change in the classification of substances which must be published in the Federal Gazette. Both paragraphs should ensure that the classifications reflect the latest state of scientific knowledge.

Re Section 3 (Classification of mixtures and documentation; verification of classification)

Section 3 regulates the classification, documentation and checking of the classification of mixtures, analogously to Section 2.

Re § 8 (Self-classification of liquid or gaseous mixtures; documentation)
Paragraph 1 obliges the operator of a facility for handling substances that are hazardous to water to classify liquid or gaseous mixtures contained or used in the facility – there is a separate regulation for solid mixtures under § 3(2) and § 10 – in one of the water hazard classes specified by § 3(1) or as non-hazardous to water. The classification into water hazard classes or as non-hazardous to water is derived from the characteristics according to Appendix 1. Insofar as data on the characteristics of substances in the mixture are drawn upon, these must be known to the operator on the basis of other valid regulations under substance or chemical law.

The obligation for self-classification does not apply according to paragraph 2 for mixtures under § 3(2) and (3) (point 1), since the regulatory authority has in these cases made final decisions, if a mixture has already had its classification announced in the Federal Gazette (point 2) or if documentation has already been prepared for a mixture (point 3). These regulations allow reference to existing classifications and thereby contribute to the avoidance of unnecessary duplication. Point 4 gives the operator, as with the substances, the option to consider the mixture as highly hazardous to water regardless of detailed information about its characteristics. Point 5 releases the operator of a transfer facility in intermodal transport from the obligation to classify the mixtures and is comparable to the regulation for substances in § 4(2) point 5. Those mixtures that have been classified and published by the Federal Environment Office do not have to be reclassified (point 6).

Paragraph 3 obliges the operator to document the data consulted by him as regards self-classification using a specific form - cf. in this regard the explanatory statement to § 4(3). The documentation on the classification of mixtures should not be sent to the Federal Environment Agency but only to the competent authority in the context of approval of the facility or on request by the responsible body in the course of monitoring. This also applies in the case where the facility does not require permission. This enables the competent authority to check the documentation and if necessary also to make a different classification (see § 9(1) sentence 3). This process ensures that the operator undertakes the self-classification

correctly. According to sentence 2, the operator is obligated to keep his documentation up to date. This regulation ensures that knowledge that the operator may acquire on his liquid and gaseous mixtures is documented and may then be reflected in the classification of a mixture if it leads to a change in the water hazard class with corresponding effects on the facility. However, the operator is not obliged to inform the authority of these findings. The absence of this requirement is intended to reduce the bureaucratic load. However, the authority always has the right to inspect the documentation, regardless of a regulation (cf. § 9(1)).

Paragraph 4 sets out restricted obligations to provide information on the part of the operator in the event that entire data documentation were to contain trade secrets regarding the recipe for a mixture. In this case, the operator can decline documentation in accordance with paragraph 3. In this instance, he shall inform the competent authority of how large the proportion is each time of all the substances in the respective water hazard classes. The identity of the substances contained in the mixture do not have to be specified in detail, however. By indicating the proportions of the respective water hazard classes, it is nevertheless possible to trace the mixture control and, hence the classification of the mixture. In the case of trade secrets which are worthy of protection, the competent authority shall document in this sense the transparency of the classification of the mixture into a water hazard class. Such a regulation is necessary in order that operators do not need to publish or release the formulas for particularly important mixtures for the success of the business.

Re § 9 (Verification of the self-classification of liquid or gaseous mixtures; changes to the self-classification)
§ 9 regulates the verification of the self-classification of liquid and gaseous substances.

Under paragraph 1 sentence 1, the competent authority has the possibility to check the self-classification and the information documented in accordance with § 8(3). In this case, the comparable duty of cooperation by the operator applies as for the substance classification under § 5(1). Contrary to the case of the substances, whose classification forms an important basis for the classification of mixtures, the checking of every self-classification for completeness and plausibility is not foreseen for mixtures. By contrast to substances, mixtures display frequently changing composition and usually occur in this form only in a single facility. These self-classifications are usually not transferable to other facilities because of different production processes and consequently other combinations in the mixtures. To this extent, it assists the reduction in bureaucracy that the classification of mixtures is not centrally collected and no publication of the classification of mixtures is foreseen. This also avoids the transfer of sensitive data.

Under paragraph 2, the competent authority can obtain advice from the Federal Environment Agency on issues concerning the classification of liquid or gaseous mixtures if it deems it necessary. This gives the competent authorities a regulatory option to obtain external expertise if different opinions arise.

Re § 10 (Classification of solid mixtures)
§ 10 regulates the possibility and the procedure to classify solid mixtures in a water hazard class or as non-hazardous to water, by way of deviation from § 3(2). This regulation also applies to solid waste, since this can be hazardous to water, like all other substances and mixtures. The handling of solid waste is therefore subject to the requirements of §§ 62 and 63 of the Water Resources Act, from which only water waste and certain radioactive substances are exempt (§ 62(6) of the Water Resources Act),

Paragraph 1 determines that an operator on his own initiative can classify a solid mixture as non-hazardous to water if at least one of the following conditions is met:

- the operator classifies a mixture in accordance with Appendix 1 point 2.2 (point 1),
- the installation is possible without restriction under other legal regulations (point 2). This regulation assumes that no adverse change in the characteristics of the

groundwater is anticipated. The prerequisite is the unrestricted permission for recycling or storing. In connection with the development of the future Substitute Building Materials Ordinance, very extensive reports were prepared, investigating the release of pollutants from recycling materials with respect both to behaviour over time and the concentrations observed. In the assessments in these reports, it was defined for the different materials under what circumstances they may be built into technical constructions. Materials that cannot lead to adverse changes in water may be built in without restriction and without the need for official procedures. These should therefore also be considered as non-hazardous to water. However, materials which may, for example, only be built in under a hydraulically bound or water-impermeable coating or form of construction, for which a certain distance from the groundwater level must be maintained or which may not be built in the water protection zones III A and III B or in a flood plain, the requirement of unrestricted installation is not fulfilled and the substances are therefore classified as generally hazardous to water. This regulation ensures that mixtures that can be installed anywhere in the environment are also not considered to be hazardous to water when being stored, handled or treated in facilities. For other mixtures, whose disposal is only possible under particular security measures, the facility-related requirements of the ordinance are applied. This is justified, since this material evidently can lead to harm to the environment because of its characteristics if no protective measures are taken. The provisions concerning the solid mixtures pursue the objective of avoiding any separate classification of waste, but rather draw on existing, in particular waste-related, regulations and use them for the ordinance. This simplifies implementation and is intended to avoid discrepancies arises in the classification under the laws on waste and water.

- the mixture may be classified as Z O or Z 1.1 material under Mitteilung 20 [Communication 20] of the Joint Working Group of the Federal States on Waste, “Requirements for the material recovery of mineral waste/Technical Rules” (as at: 6 November 2003) (point 3). This technical rule was published in 2004 by *Erich Schmidt-Verlag* Berlin and has been archived securely at the German National Library. It can also be inspected at the library of the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety in Bonn. The fixed reference to this rule document is necessary for the period until the planned Substitute Building Materials Ordinance for unambiguous determination of the recycling materials that are non-hazardous to water. This rule document is also familiar and recognised in practice, so that this reference determines a simple and operator-friendly procedure. The assignment of the Z0 and Z1.1 materials to substances that are non-hazardous to water corresponds to implementation practice in the Federal States. These considered material in classification level Z1.2 and above to be hazardous to water. The existing practice of also allowing different regulations to be made for facilities individually is covered by § 16 (see there for more information).

Paragraph 2 affords the operator the opportunity to classify solid mixtures in water hazard classes. This option becomes attractive if a solid mixture is processed and then transformed into a new mixture. The mixing rule in Appendix 1 point 5 contains no reference to substances that are generally hazardous to water, so to avoid undue hardship, a special regulation was necessary.

Paragraph 3 sentence 1 determines that an operator must document the evidence that a solid mixture can be classified as non-hazardous to water and present it to the competent authorities in the context of any required permission or monitoring. As for the liquid and gaseous mixtures, the operator is obligated to maintain the documentation according to the latest information (sentence 2). According to sentence 3, the authorities are able to check this evidence and under sentence 4 if necessary to have missing or implausible documents supplemented or corrected.

A facility that handles substances that are non-hazardous to water is not covered by the ordinance. The operator remains, however, obligated to prove in the event of controls or any harm to groundwater that his facility really only handles substances that are non-hazardous to water. Reference is otherwise made to the explanatory statement regarding § 8(3).

Paragraph 4 determines that the competent authority may classify a solid mixture as generally hazardous to water or assign it to a water hazard class which differs from the operator's classification. Under sentence 2, it has the option to seek advice from the Federal Environment Agency before it gives the operator this result in written form according to sentence 3. An appeal may be made against such a decision. Paragraphs 3 and 4 provide the operator with effective protection against the possible misuse of an erroneous classification.

Re § 11 (Classification of mixtures by the Federal Environment Agency)
§ 11 sentence 1 affords the Federal Environment Agency the opportunity to classify mixtures as non-hazardous to water or into a water hazard class, to what end only the operator and the competent authority are otherwise authorised. In this regard, such a classification is to remain the exception and shall only be carried out if there is a need for a valid national regulation. This may be the case, for example, if different authorities or operators come to different conclusions about the classification. This is not the case, however, when the operator and competent authority have different opinions or when an operator hopes to gain a commercial advantage from a classification which is valid nationwide. In order to meet the criteria of this ordinance, an unambiguous characterisation of the mixture must be made which enables another user unambiguously to determine that the mixture in his possession, from its composition and characteristics, is the mixture that was classified. The paragraph does not contain a special regulation on who can order this classification. Usually, the classification of the mixture is the result of a discussion in the business area of the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety or the Federal Environment Agency. It is also possible in principle, however, that an operator or a manufacturer/distributor will appear in person. In these cases, however, there is no right to such a classification. Sentence 2 regulates the publication of such a classification by reference to § 6(4).

Re Section 4 (Commission for the evaluation of substances that are hazardous to water)

Re § 12 (Commission for the evaluation of substances that are hazardous to water)
§ 12 sets out the composition and tasks of the Commission for the evaluation of substances that are hazardous to water. The Commission has already previously advised the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety on classification issues.

Paragraph 1 sentence 1 assigns the Commission for the evaluation of substances that are hazardous to water to the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety. Sentence 2 regulates the advisory function of the Commission for the evaluation of substances that are hazardous to water towards the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety and the Federal Environment Agency. The Commission for the evaluation of substances that are hazardous to water no longer has to be involved in every single decision taken by the Federal Environment Agency, as was the case previously. Only when the Federal Environment Agency for particular reasons is unable to decide separately will it request an opinion from the Commission for the evaluation of substances that are hazardous to water, which can then be included as input to the classification decision according to § 6(1) and (2). The Federal Environment Agency may also obtain an opinion from the Commission for the evaluation of substances that are hazardous to water in the event of an appeal disagreeing with a classification. The Commission for the evaluation of substances that are hazardous to

water may, however, on its own initiative take an active advisory role, for instance, to take account of international developments in the assessment of substances, on the necessity to undertake further test procedures, or to continue advisory processes.

Paragraph 2 sentences 1 and 2 determine the composition of the Commission. It is ensured through the balanced inclusion of official, industrial and scientific expertise that the opinions on the classification of substances under § 6(1) point 2 are independent and practical and thereby achieve a high level of acceptance among those affected. The members are appointed according to their particular professional expertise. They represent their own professional view. The membership is honorary, in accordance with sentence 3. In difficult cases, the involvement of these experts from different professional specialities is intended to ensure the classification.

Paragraph 3 regulates the appointment of members of the Commission for the evaluation of substances that are hazardous to water by the Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety, along with the election of the chairperson and the adoption of rules of procedure.

Re Chapter 3 (Technical and organisational requirements for facilities handling substances that are hazardous to water)

Chapter 3 regulates the requirements for facilities for the handling of substances that are hazardous to water and the duties of the operator.

Re Section 1 (General provisions)

Section 1 regulates restrictions to the area of application of Chapter 3 (§ 13), the determination and demarcation of facilities (§ 14), the status and announcements of technical rules (§ 15) and the possibility for the competent authorities to set different requirements (§ 16).

Re § 13 (Restricting the scope of this chapter)

§ 13 determines exemptions from the area of application of Chapter 3 of the ordinance.

Paragraph 1 determines that for facilities for handling floating liquid substances (so-called floaters), the requirements of the chapter shall only apply when it cannot be excluded that the floaters may enter a body of water above ground. An entry into a body of water above ground may in particular be possible if these facilities are on or in the vicinity of a surface body of water or the floaters may enter such a body of water due to the slope or as part of a direct or indirect inflow into such a body of water. This regulations is due to the fact that these substances, due to their floating characteristics, lead on entry to a surface body of water to an adverse change in the characteristics of this body of water, in other words would be substances that are hazardous to water. Facilities in which the floaters cannot enter a surface body of water therefore do not fall under Chapter 3 of the ordinance. An example would be an underground hydraulic unit of a lift powered by such substances.

Paragraph 2 point 1 exempts the facilities storing domestic waste in the private sphere. Also exempt is business waste of the kind that typically arises in offices, authorities, schools or restaurants, such as papers, organic waste from canteens, paper napkins and the like. Domestic waste and biological waste may according to the current state of knowledge have water-polluting characteristics. The containers in which these types of waste are collected, which were introduced by the recycling companies and are designed to fit the recycling vehicles do not, however, usually meet the requirements of Chapter 3. A change in this situation is as inappropriate as the redesign of the locations for these containers in view of the requirements of Chapter 3. To avoid undue hardship, a special regulation is therefore made according to which these facilities are not subject to requirements as long as they are allocated to those buildings where the waste arises.

Point 2 contains a corresponding regulation for the storage and treatment of biological waste, e.g. in the garden, as part of home composting. Treated biological waste, i.e. compost, is not classified as hazardous to water, although this is not based on the original substances, during the treatment of which harmful leachate may arise. In order to avoid making home composting more difficult and thereby requiring that in future it meets the requirements of Chapter 3, it is also not subject to any requirements. In both cases, however, the requirements of the ordinance for the facility in which the collected waste is stored or treated in central facilities do apply.
Point 3 releases business from adhering to the requirements of the ordinance in the collection and storage of solid substances that are hazardous to water and solid waste containing substances that are hazardous to water, in that a special regulation for sealed containers up to 1 250 litres is introduced. Corresponding collection containers can be found in many workshops and factories. The regulation should be seen as a *de minimis* rule to reduce bureaucracy and simplify the entire approach. Contrary to the household waste, for which all requirements are excluded, in this case certain practical basic duties are expected on the operator.
Point 4 adds that Chapter 3 should also not be applied to the storage of fixed waste which arises on building sites from building activity, such as when demolishing a building. This regulation is in particular to avoid facilities needing to be constructed for interim storage of waste immediately arising on a building site. It is to be assumed that this interim storage is limited to a relatively short timeframe.

Liquid manure and slurry installations or silage seepage facilities must ensure the best possible protection for bodies of water from detrimental changes to their characteristics in accordance with § 62(1) sentence 3 of the Water Resources Act. In accordance with paragraph 3, only § 16 (Official instructions), § 25 (Obligations in the event of operational malfunctions; repairs) and § 52 (Distance to wells for drinking water, springs and bodies of water above ground) shall apply to them. Appendix 7 predominantly applies to these liquid manure and slurry installations or silage seepage facilities. Chapters 1, 2, 4 and 5 shall, however, also apply to liquid manure and slurry installations or silage seepage facilities.

To reduce the water pollution caused or triggered by nitrates from agricultural sources and to prevent further water pollution of this type, Article 5 of Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources (Nitrates Directive) requires the stipulation of action programmes for the areas designated as vulnerable or an action programme for the entire territory of a Member State.

In Germany, the national action programme consists of two parts. The first part includes provisions concerning the application of nitrogenous fertilisers to agricultural useful areas. The second part includes provisions relating to the design of containers for storing nitrogenous fertilisers and other substances which accumulate in agriculture. This second part of the action programme is transposed in a legally-binding manner by means of this Federal Ordinance on facilities for handling substances that are hazardous to water.

In accordance with the judgment of the Court of Justice of the European Union against Belgium of 17 June 2010 (cases C-105/09 and C-110/09; preliminary ruling procedure), a strategic environmental review shall be conducted in accordance with § 14b of the Environmental Impact Assessment Act, in conjunction with the SEA [strategic environmental assessment] Directive, regarding the provisions concerning the design of liquid manure and slurry installations or silage seepage facilities and the public shall be given the opportunity to comment within a certain timeframe of [ ] weeks. The outcomes shall be assessed, made available to the public and become part of this ordinance.

Re § 14 (Determination and demarcation of facilities)
§ 14 regulates the formal determination and demarcation of facilities in relation to other

facilities.

Paragraph 1 determines that the operator of a facility must specify and document which plant parts belong to a facility and where the interfaces to other facilities are situated. In the past, the question of which parts belong to a facility and where a facility runs into another the subject of intensive discussions between operators, experts and representatives and representatives of the authorities. An uncontroversial regulation covering all cases has so far not been achieved. Since the operator has the most extensive knowledge of his sites, he is also best placed to determine which parts belong to a facility. Most Federal States have since adopted this viewpoint. The authority is not prevented from reviewing this decision, since the operator must have documentation of the demarcation of the facility. If an operator only operates one facility, the question of demarcation and interfaces naturally does not arise. The statement that, for instance, a painting workshop only has one colour depot as a drum and container storage facility is sufficient.

According to paragraph 2, the demarcation must be made as dictated by the function of the facility and the procedural connection. It is intended thereby to prevent processes that take several steps from being separated. In the case of the demarcation of facilities which consist of several parts in which substances that are hazardous to water are intentionally found, the function of the facility should therefore remain at the forefront and associated treatment steps should not be assigned to different facilities. However, it is inappropriate to make one facility out of parallel “production lines.” Sentence 2 substantiates sentence 1. According to this, parts of facilities between which substances that are hazardous to water are exchanged, or with respect to which a direct safety-related correlation exists, shall be consolidated into a single facility. In this way, as before, for example, interconnected containers are consolidated into a single facility, just like areas for drawing off which have several drawing off devices. However, a pipeline which, in large chemical sites in particular, connects many individual facilities, does not constitute one joint facility.

Paragraph 3 takes over a well-established regulation from the Model administrative instruction concerning substances that are hazardous to water (§ 2(8)). In the case of areas on which containers or packaging with substances that are hazardous to water are regularly placed, a comparable risk arises as in other facilities, meaning that the surfaces used in this way should be seen as parts of the facilities. This is, however, not intended to cover those areas on which substances that are hazardous to water in containers or packaging are briefly, but not regularly, made available (§ 63(2) point 2a of the Water Resources Act).

According to paragraph 4 sentence 1, areas on which means of transport containing substances that are hazardous to water are parked do not constitute storage facilities. Such means of transport include, in particular, petrol tankers with MOT approval which are generally parked at parking spaces or on parking areas envisaged for this purpose. This provision does not, however, include the tanker by means of which a petrol station container is filled, for example. This constitutes drawing off, which is covered by the ordinance. Sentence 2 adopts the definition under § 2(21) sentence 2 for the demarcation of handling facilities in relation to storage facilities.

Paragraph 5 assigns a surface to a facility if it is being filled from that facility or if containers or packaging with substances that are hazardous to water is taken from the facility or placed in the facility. If, for example, the liquid from treatment baths must replenished, it is practical to assign the area from which this is done and on which a refill container may be temporarily located to this treatment facility. This also applies to the deposit and removal of containers or packaging in a warehouse, since in many cases no separate transfer facility is created and this process is undertaken on an existing surface assigned to the actual warehouse facility.

Paragraph 6 specifies the definition of "facility" in relation to manufacturing, treatment or usage facilities. The objective is to avoid too much fragmentation of facilities and thereby

make a contribution to simplification and improvement of the overview. The regulation is taken from § 2(6) of the Model administrative instruction concerning substances that are hazardous to water. Under sentence 1, containers in which substances that are hazardous to water are neither handled nor used, but which have a close functional association with a facility, are assigned to that facility. This shall apply to a holding tank, for example. In particular in complex industrial parks, it is regularly debated whether particular containers should be assigned to a manufacturing, treatment or usage facility or a storage facility. In these cases, under paragraph 6 sentence 2, the allocation as a storage facility takes precedence. In this sense, containers that are associated with several manufacturing, treatment or usage facilities are considered as storage facilities, as are containers in which a larger volume of substances that are hazardous to water is stored than is required for daily production or the preparation of a batch.

Paragraph 7 is based on the provisions of § 62(1) sentence 2 points 2 and 3 of the Water Resources Act relating to pipeline facilities. Not included are pipelines for transporting substances that are hazardous to water in accordance with Appendix 1 point 19.3 of the Environmental Impact Assessment Act, regardless of whether they exceed the thresholds or test values mentioned therein. The provisions under Chapter 3 shall not apply to such pipelines, just §§ 20 *et seq.* of the Environmental Impact Assessment Act and the Pipeline Ordinance. For simplification, paragraph 7 gives the option to assign pipelines that are accessories to a facility for handling substances that are hazardous to water or link facilities that are spatially and operationally closely associated to one of these facilities. This is intended, for example, to prevent a situation whereby a pipeline which leads from a fuel oil container to the burner is treated as a separate facility.

Re § 15 (Technical rules)
In accordance with § 62(2) of the Water Resources Act, facilities may only be established, maintained, operated and decommissioned in accordance with the generally recognised rules of the trade. Under the generally recognised rules of the trade are in particular understood the principles and solutions specified in technical standards and requirements that have been tried and tested in practice and are recognised by the majority of the professional active in this area. § 15(1) clarifies the fact that technical rules which correspond to the generally recognised rules of the trade are, in particular, those that have been developed by the technical/scientific associations active in this field (e.g. the German Association for Water, Wastewater and Waste). They normally are subject to a formal, public recognition procedure in which the professional circles can contribute their opinions and expertise, which are usually published. The procedure here corresponds, for example, to DWA-Arbeitsblatt A 400 [worksheet A 400 published by the German Association for Water, Wastewater and Waste], “Grundsätze für die Erarbeitung des DWA-Regelwerkes” [“Principles for drawing up regulations of the German Association for Water, Wastewater and Waste”] or comparable regulations.
Technical rules include the following in particular. The list does not constitute any assessment, meaning that all the technical rules mentioned have the same weighting in principle.

1. Technical rules for specific types of facility
The generally recognised rules of the trade include those Technical rules on substances that are hazardous to water published by the German Association for Water, Wastewater and Waste for specific types of facility (e.g. fuel oil consumer installations) and construction methods (e.g. design of sealed surfaces).
With a view to the immediate safety of facilities, the following regulations in particular can be seen as generally recognised tools of the trade:
a. Technical rules for combustible fluids if these are not already included in Building Regulations List A,
b. Technical rules for pressure vessels, and
c. Technical rules of pipelines

These rules will be superseded by the Technical Rules for Operational Safety, which will be developed by the Committee for Industrial Safety and published in the Federal Labour Gazette by the Federal Ministry of Labour and Social Affairs. However, these rules are increasingly declining in importance for water protection.

2. Technical rules for construction products, insofar as they affect water protection.
Technical rules for national construction products are listed in Building Regulations List A Part 1 (regulated construction products). As generally recognised codes of practice with respect to water protection, the technical rules listed in Building Regulations List A, Part 1 under volume number 15 (Construction products for facilities used at a fixed location for storing, drawing off and handling substances that are hazardous to water) apply to the construction products listed there. The same applies to test procedures according to which the construction products are assessed that are used in handling substances that are hazardous to water and identified in Building Regulations List A Part 2.

Technical rules for construction products as a result of the transposition of Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products (OJ L 40 of 11 February 1989, p. 12, Construction Products Directive) are set out in Building Regulations List B Part 1. As generally recognised codes of practice with respect to water protection, the technical rules listed in Building Regulations List B, Part 1 under volume number 1.15 (Construction products for facilities used at a fixed location for storing, drawing off and handling substances that are hazardous to water) apply to the construction products listed there.
The construction products listed in Building Regulations List B Part 1, under Section 4 (Construction products in respect of which a European technical approval has been issued with no guideline) must also satisfy the provisions of the List of Technical Building Regulations, Part III.

All other series-produced construction products not coved by the remarks above which are to be used in facilities for storing, drawing off or handling may only be used if they have a general building inspectorate approval from the Deutschen Instituts für Bautechnik ([German Structural Engineering Institute] DIBT).

3. German and European standards
Insofar as standards do not relate to construction products and therefore do not fall under 2), they may also be regarded as Technical Rules. This includes, for example, fuel or test standards.
The Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety may, if it considers it appropriate, announce technical rules in the Federal Gazette.

Paragraph 2 supports the transposition of European law to prevent trade barriers. Standards and other provisions from other Member States of the European Union or other Signatory States to the Agreement on the European Economic Area are equivalent to technical rules pursuant to paragraph 1 provided the same level of protection is achieved in a permanent manner.

Re § 16 (Official instructions)
§ 16 gives the competent authority the power in particular to lay down requirements differing from those of the ordinance (paragraphs 1 and 3) and to impose monitoring requirements on the operator (paragraph 2). Paragraphs 1 and 3 provide that in individual cases, the respective location and water hazard, on the one hand, and the special features of the facility, on the other, can be taken into account. § 16 extends the unchanged regulations on the tasks and powers of the water supervisory body in §§ 100 and 101 of the Water Resources Act.

Paragraph 1 sentence 1 gives the competent authority the possibility, in the event of a particular risk of water pollution and when otherwise the observance of the requirements under § 62(1) of the Water Resources Act is not possible, to also impose other requirements that go beyond the generally recognised rules of the trade, the requirements as per Chapter 3, or the requirements laid down by the determination of suitability. In individual cases, this may, in accordance with sentence 2, lead to a refusal to allow a facility to be constructed.

Under paragraph 2, the competent authority may, in individual cases, require the operator to carry out measures to monitor the water and the soil. This corresponds to § 19i(3) of the previous version of the Water Resources Act and is particularly appropriate when the facility must be operated in such a way that small leaks will inevitably occur which cannot be certain to be captured by a retention system. This is the case, for example, with facilities next to or over bodies of water, such as hydraulic units of locks where a corresponding safety device is not possible. The result should be that water pollution due to escaping substances will be recognised quickly and corrective action can be taken to prevent serious harm. In the past, however, hardly any use was made of this instrument. In the explanatory statement to the Water Resources Act (*Bundestag* printed paper 16/12275 of 17 March 2009, p. 70), it was stated that §§ 19i to 19l are to be continued in the ordinance to be published by the Federal Government. See also § 24(1) and § 46, in conjunction with § 47(1) to (3) and (6) and § 63(2).

Paragraph 3 gives the competent authority the opportunity to allow exceptions from the requirements of Chapter 3 of this ordinance, if justified by the particular circumstances of the individual case and provided the requirements under § 62(1) of the Water Resources Act are nonetheless satisfied. An exception may be considered, for example, if a facility with solid substances that are generally hazardous to water is constructed at a site featuring powerful basecourses (e.g. clays) which protect the groundwater. If these layers ensure adequate protection throughout the entire period of operation and ground protection considerations do not indicate otherwise, the requirements in terms of the fortification of the areas can be reduced.

Re Section 2 (General requirements pertaining to facilities)

Section 2 regulates the technical requirements that should basically be satisfied by all facilities (§§ 17 to 23), as well as the obligations when filling and emptying facilities (§ 24) and during operational malfunctions (§ 25).

Re § 17 (Basic requirements)

§ 17 sets out the basic requirements that should be satisfied by all facilities regardless of their size and the level of water pollution of the substances used, so long as no different requirements are specified in the following paragraphs. These requirements broadly correspond to those of § 3 of the Model administrative instruction concerning substances that are hazardous to water which have been implemented by the Federal States for many years without significant variation.

Paragraph 1 requires that all facilities are planned, constructed, constituted and operated in such a way that substances that are hazardous to water cannot escape throughout the period of operation, that any leak that arises can be quickly and reliably identified and, in the event of damage, that the substances accumulating can be disposed of or eliminated harmlessly. The concept of waste disposal under point 4 shall be assigned to waste law, while elimination stems from the law on water and the correct disposal of wastewater required therein. These basic requirements form the central element of the technical facility-specific regulations and were taken from the Federal State ordinances. A new element is that a facility must henceforth be designed in such a way in future that these requirements are satisfied. The emphasis on qualified facility planning is required, since it has emerged during

implementation that the planners are often insufficiently aware of the applicable technical rules. Both in the notification procedure and in the determination of suitability procedure, unnecessary re-planning and delays arise that are even more serious when the facilities have not been subject to pre-inspection by the authorities. It may then be the case that the faulty planning and implementation is only noticed during a commissioning test, at which point the removal of planning errors entails substantial difficulties for the operator. No professional description or seal of approval exists for planners or could be introduced. However, Technical Rule No. 779 concerning substances that are hazardous to water should give indications as to how a planner can be shown to be qualified for the task, for example, through evidence of further educational activities. Completed studies, e.g. as an architect or construction engineer, may not necessarily be sufficient, since the special technical constructions which must be considered when handling substances that are hazardous to water (e.g. in concrete construction) is not included in standard training.

Under paragraph 2, the facility must be leakproof, stable and designed such that these characteristics in particular remain in the expected operational conditions and the physical, thermal and chemical influences which prevail in this regard shall survive. This also includes protection against mechanical damage including that which may arise from traffic or in earthquake areas. The provision is taken from § 3(1) of the Model administrative instruction concerning substances that are hazardous to water.

Paragraph 3 sentence 1 specifies that underground containers for liquid substances that are hazardous to water may not be single-walled. This regulation, already present in Federal State law, is due to the particular risk potential of underground facilities. For these facilities, a leak can only be detected with a significant time delay. The volumes of escaping substances that are hazardous to water and the consequent damage to the bodies of water are therefore significantly greater than for a surface facility. This can only be prevented if two barriers hold back the substances that are hazardous to water and an alarm is triggered as soon as the first barrier leaks (cf. § 2(16)).
The ban on single-walled underground tanks for liquid substances that are hazardous to water is supplemented, by means of sentence 2, by a ban on the storage of certain gaseous substances. On the one hand, substances defined as gaseous pursuant to § 2(5) can also occur in liquid form in practice; on the other, gaseous substances which are heavier than air would also be able to result in groundwater contamination in the event of damage in the absence of a second barrier.

Paragraph 4 sentence 1 requires that when decommissioning a facility, the substances that are hazardous to water contained therein are removed so that no risk to the water can arise from the decommissioned and usually no longer monitored facility. Any leak detection liquid may also need to be removed, if this is technically feasible. To remove the leak detection liquid, it may be necessary, for example, to bore a hole at the bottom for the inner container wall in order to remove the liquid. In accordance with sentence 2, misuse of the facility must be prevented, for example, by removing or securing fittings. It is not obligatory to remove the facility, however. After correct decommissioning, any remaining installations will not constitute a facility for handling substances that are hazardous to water.

Re § 18 (Requirements concerning the retention of substances that are hazardous to water)
§ 18 governs requirements concerning the retention of substances that are hazardous to water

An important element in the prevention of water pollution is a second safety barrier, by means of which any substances that are hazardous to water which escape in the event of an operational malfunction can be contained in an appropriate manner (cf. § 17(1) point 3). Paragraph 1 sentence 2 requires the facilities to have a retention system for this purpose. This type of retention is not necessary if the facility is designed with a double wall and a leak

detection system. It is ensured through this type of construction that if the inner container wall fails, the intact outer container wall prevents any substances that are hazardous to water from escaping, hence, a complete retention volume is guaranteed. A facility may also have different retention systems for individual plant components (sentence 3). However, when a double-walled facility also has parts that are single-walled, e.g. pipeline connections, flanges or fittings, these must have their own retention systems (sentence 4).

Paragraph 2 specifies that all retention systems must always be impermeable to liquids within the meaning of § 17(2) and may not have any drains. If it is impossible to prevent precipitation from entering the retention system, the ban can be waived according to the stipulations of § 19(1) to (5).
The concept of impermeability to liquid, frequently used in the ordinance, stems from the Technical Rules for substances that are hazardous to water and replaces the previously usual concepts such as sealed and durable. The decisive aspect here, in accordance with sentence 2, is that the sealing and loadbearing functions of the construction work remain intact throughout the period of use. Thus, for example, the sealing function of concrete surfaces may be lost if it is impinged by CHC [chlorinated hydrocarbons], since concrete only has a limited sealing function compared with CHC. The loadbearing function is not affected, however. In the case of bitumen, however, the loadbearing function is undermined if it is impinged with solvents, since the solvents dissolve the bitumen and therefore undermine the cohesion of the construction. Only when both functions can be maintained for the requirements set of the type of construction of the facility can the construction be designated as impermeable to liquids. The decisive feature of this type of construction is that substances that are hazardous to water do not reach the impacted side, while observing a safety margin. The concept “impermeable to liquids” is an established concept, but this does not mean that an area impermeable to liquids necessarily looks the same in all facilities. The requirement should be adjusted to the facility in question, in particular taking into account which substances may impact a corresponding area. Operational requirements may also play an important role if, for example, sealing surfaces are travelled over by heavy goods vehicles. The resulting operational requirements can be so great that the requirement of impermeability to liquids is basically fulfilled at the same time. Designs that are also impermeable to liquids which the facility does not handle at all are therefore not required, so to this extent, an area impermeable to liquids does not mean that the most costly construction method must be chosen. Facility sections that are continuously impinged by substances that are hazardous to water must be more robustly designed than those for which the substances that are hazardous to water need only be contained for a few hours or days in the event of an operational malfunction. The Technical Rule concerning substances that are hazardous to water in TRwS DWA-A 786 [worksheet 786 published by the German Association for Water, Wastewater and Waste entitled]: "Ausführung von Dichtflächen“ [“Execution of sealing surfaces“ also defines accordingly three different load durations according to which the execution of the sealing surfaces is determined.

In accordance with paragraph 3, the volume of the retention system must basically be so large that escaping substances that are hazardous to water can be contained in their entirety in the event of an accident. This corresponds to the existing provisions in almost all Federal States. The volume of the retention system can be smaller than the associated container in the case of storage and manufacturing, treatment or usage facilities (point 1) if the contents of the container are not entirely emptied even under unfavourable circumstances. In addition, organisational measures must ensure under all operating conditions that the leakage is sealed before the volume of the retention system is exceeded or the substances that are hazardous to water are caught by other containers. Conditions are unfavourable, for example, during weekends and holidays, if no operating staff are present who can undertake corrective action. In this form of construction, there is always a residual risk compared with containment of the entire volume of substances that are hazardous to water. The cost advantage of such a partial containment is usually limited, since the savings from this form of construction are often minor compared with the long-term organisational measures. In the

case of facilities for drawing off liquid substances that are hazardous to water, the retention volume must correspond to the volume which could be released in the event of the greatest possible volume flow until such time as suitable safety measures can take effect (point 2). Point 3 regulates the volume for handling facilities. All three regulations correspond to those of the Model administrative instruction concerning substances that are hazardous to water in the Federal States.
Sentence 2 contains a special regulation for facilities with substances in WHC 1 with a volume of up to 1 000 litres. Under the Model administrative instruction concerning substances that are hazardous to water, these facilities require no containment capacity beyond operational requirements. Since, in these cases as well, leaks must be detected and corrective action undertaken, many operators have positioned these facilities above containment vessels in order to avoid the need for further control measures. This well-established practice is adopted in the ordinance, meaning that the operator now has the option to establish the facility on an area that meets operational requirements and to make provision for corresponding technical or organisational infrastructure measures which also prevent water pollution even in the event of operational malfunctions. Alternatively, the operator can position the facility above an area impermeable to liquids, providing inherent safety. The regulations for containment in paragraph 3 must basically be fulfilled by all facilities. However, there are a large number of facilities for which these requirements cannot be met, in particular for constructional or functional reasons. Thus, heat exchangers, for example, cannot be installed with double walls since their function would no longer be fulfilled. For this reason, it is necessary to establish special rules for these cases which, for particular facilities, define how a safety level can be reached that corresponds to that described above. These special rules can again be found in Section 3. The provisions of Section 3 take priority over those of § 18(3).

Paragraph 4 requires a retention system for facilities of hazard level D to have a containment volume for the entire volume which may be released from the largest closed-off operational unit in the case of operational malfunctions. Measures which could limit the release of substances that are hazardous to water in the event of operational malfunctions, such as the sealing of a leak or the containment of leaking plant components, may not be taken into account. However, if the facility has closed-off operational units which are so well separated that substances that are hazardous to water from one plant component cannot enter another and the substances that are hazardous to water from the undamaged component cannot release substances through the leak of the other component, it is sufficient to use the largest closed-off operational unit when determining the volume. This regulation continues the existing provisions of most Federal States and corresponds to the special hazard potential or the especially hazardous nature of the substances that are hazardous to water of these facilities, in which the size of the escaping volumes can lead to substantial adverse effects on the environment.

Paragraph 5 lays down requirements for the installation of individual single-walled containers, pipelines and other plant components. This must be done in such a way that direct visual inspection is possible. The containers, pipelines and other plant components must therefore each be so far from other containers and the floor or walls of retention systems such that an expert can, during an inspection for example, recognise leaks or developing material changes that could result in leaks. Concrete requirements are set out in the technical rules.

Paragraph 6 concerns surface containers with leak detection liquids in WHC 1 for which no containment of leak detection liquid is required if its volume is less than 1 000 litres. Underground containers (cf. in this regard § 17(3)) and surface containers with a volume of leak detection liquid in excess of 1 000 litres are required to have a vacuum leak detection system, for example.

If escaping substances that are hazardous to water in the event of an accident may react to

each other in a way that puts the functionality of the retention system at risk, paragraph 7 requires that the substances which react with one another are contained separately.

Re § 19 (Requirements in terms of drainage)
§ 19 sets out the requirements in terms of drainage in facilities where the collection of precipitation is unavoidable. This is the case, for example, as regards the open collection areas of large fuel depots, facilities for drawing off, even if they are usually covered, as in the case of petrol stations, for instance or handling facilities. These requirements are primarily to ensure that released substances that are hazardous to water can still be contained. The requirements under wastewater law in §§ 54 *et seq.* and, for example, in the Wastewater Ordinance, are not affected by this. In accordance with the requirements derived therefrom, it is also necessary to make provision, in a port for example, for measures in the event of an emergency or fire so as to prevent polluted water from entering a body of water.

Paragraphs 1 to 3 set out the additional requirements which result from the handling of substances that are hazardous to water. The provisions governing the disposal of wastewater, here in particular §§ 54 *et seq.* of the Water Resources Act, shall not be affected.

Under § 18(2), retention systems may not have drains, since they are otherwise not certain to be able to carry out their task. Under paragraph 1, there is only one exception from this regulation, when the fact that precipitation collects in a retention system cannot be prevented. This is especially the case for open-air facilities which are not or only partly covered. In this case, provision may be made for a drain which must, however, be closed during normal operation and may only be opened when an inspection ensures that the precipitation has not been contaminated by substances that are hazardous to water. If this is the case, it can be diverted with other uncontaminated precipitation. Otherwise, it must be supplied for appropriate wastewater or waste disposal.
In the case of facilities for drawing off or handling, such an inspection is usually not practicable prior to discharge. Paragraph 2 therefore stipulates in this instance that precipitation that may have been contaminated by substances that are hazardous to water must fulfil the corresponding requirements for introduction into a sewer or body of water. The requirement for an operational wastewater treatment facility may result from these requirements, although not based on this ordinance. In the case of a petrol station, for example, an inflow is only permissible when the contaminated precipitation has been diverted via a light fluid separator. The light fluid separator must be so designed that during normal operation of the petrol station, it contains the hydrocarbons to the extent needed to meet the requirements of the (municipal) wastewater regulations. These will also be satisfied when drawing off fuel containing ethanol, since the addition of small amounts of ethanol in wastewater which, in other respects, has been correctly pre-treated, is non-hazardous and therefore limited. For E85 fuels, the existing rules continue to apply since here, the prevention of explosion must be considered as well as the regulations relating to wastewater. The requirement for containment in the event of operational malfunctions according to § 18(3) sentence 1 point 2 must also be fulfilled. For example, in the event of an operational malfunction, the light fluid separator must automatically close the outflow into the sewer.
Sentence 2 regulates transformers and switchgear and controlgear in the electrical supply. If the municipal wastewater regulations permit it, the precipitation may be introduced into a sewer if the substances that are hazardous to water which are released in the event of an operational malfunction are retained. In this case, the primary task of a light fluid separator is to close the outflow in the event of operational malfunctions and thereby to contain the escaping mineral oils.

Paragraph 3 determines the special requirements for the drainage from petrol stations for own consumption. In accordance with the aforementioned worksheet 781 from the German Association for Water, Wastewater and Waste, the type and size of the retention system, as well as the disposal of the precipitation, may vary. The rules also lay down the additional

marginal conditions to be fulfilled in this regard under which variations are possible. Such a reduction in the level of requirements is appropriate for these facilities since they are usually constructed outside settlement structures, e.g. in agricultural yards, where there is no access to the sewer network.

Paragraph 4 regulates the drainage of water from refrigeration units installed outdoors. Protection from precipitation is not possible for these facilities because of the necessary air exchange, so that when the facility leaks, the substances that are hazardous to water flow out with the rainwater. In order to prevent water pollution arising as a result, the facility must be placed on an paved area (cf. § 36(3) point 3) and the precipitation running off this area in accordance with paragraph 4 must be diverted into the sewer for untreated wastewater or mixed water. The ordinance contains no further remarks on the separation of the areas on which refrigeration units are installed from other areas on which precipitation may also accumulate. It will, however, usually be required, since the sewer networks only have a limited capacity and consequently cannot take all the precipitation. Corresponding construction measures do not, however, fall under the regulatory scope of § 62 of the Water Resources Act.

In the case of biogas facilities, paragraph 5 requires that precipitation accumulating on areas for drawing off and open storage areas of fermentation substrates which may be polluted by fermentation substrates or residues are collected and disposed of as wastewater in accordance with regulations. Alternatively, recovery as waste is a possibility. This disposal of wastewater or waste recovery may not be entirely possible, as highly polluted precipitation may not be accepted by the wastewater authority or very high costs may result in the case of waste disposal. The precipitation polluted with substances that are hazardous to water from biogas facilities with fermentation substrates of agricultural origin may also be spread over agricultural areas in due consideration of the fertiliser regulations. Until distributed, however, the untreated precipitation remains subject to the regulatory regime under the Ordinance on facilities for handling substances that are hazardous to water. The precipitation accumulating within the surrounding wall must be disposed of or recovered as per regulations in accordance with sentence 3. In this case, recovery may include the return to a container in the biogas facility or the removal to a space used for agriculture. The authorities may also agree to the leaching of the precipitation in the surrounding wall if it is ensured that the functionality of the surrounding wall is not compromised and the floor of the surrounding wall is so well sealed that the fermentation substrates or fermentation residue cannot enter the groundwater.

Paragraph 6 regulates the special case where the access of precipitation into a retention system cannot be prevented but no staff are available on site to monitor whether any substances that are hazardous to water have escaped. This applies to facilities that are operated in the open countryside far from settlements and sewer networks and for which precipitation usually flows into a surface body of water or the groundwater. In these cases, the competent authorities must decide on the type of containment as part of the correct drainage of the facility.

In the case of uncovered retention systems in which precipitation may collect, paragraph 7 specifies that not only the required volume of released substances that are hazardous to water must be able to be collected, but also the precipitation which falls during a simultaneous precipitation event. The rainfall to be used for the calculation is specified in the Technical Rule in worksheet 779 published by the German Association for Water, Wastewater and Waste entitled "General Technical Regulations".

Re § 20 (Containment in the event of fire)
§ 20 regulates the requirement that it is ensured during the planning, construction and operation of facilities handling substances that are hazardous to water that no substances that are hazardous to water may be allowed to escape even in the event of fire, and that in

particular extinguishing, irrigation and cooling water contaminated with substances that are hazardous to water must be contained. Reaction products created during fires often display toxic characteristics, meaning that if they enter bodies of water, considerable harm may result. § 20 does not affect fire protection provisions in the construction ordinances of Federal States, which are primarily concerned with the protection of life and health, the protection of the environment and public safety and the provision of effective fire-fighting. These existing construction regulations are supplemented by § 20 with respect to the preventive protection of bodies of water from contaminated extinguishing water and the escape of substances that are hazardous to water in the event of fire. Regulations corresponding to § 20 are also already included in the Technical Rule concerning substances that are hazardous to water in worksheet 779 published by the German Association for Water, Wastewater and Waste entitled: General Technical Regulations, publication date: April 2006. It is planned to extend this regulation and to merge it with the existing extinguishing water guideline. In sentence 1, explicit reference is made to the generally recognised rules of the trade, according to which the containment is required and measured, since this is not only a regulation with respect to water but a general set of rules in which representatives of business, building supervision, water legislation and the fire brigade have been engaged.
Sentence 2 specifies that sentence 1 shall not apply to certain facilities. This relates to the facilities where a fire is unlikely to break out, i.e. where the substance that is hazardous to water and the facility itself are not combustible. In addition, fuel oil consumer installations are exempt from extinguishing water containment since it can basically be assumed here that a fire will be extinguished so quickly that measures for containing extinguishing water are inappropriate or the amount of extinguishing water is small compared to what arises from the fighting fire in a house.

Re § 21 (Special requirements for retention in the case of pipelines)
§ 21 regulates the technical design of surface and underground pipelines. For pipelines used to convey substances that are hazardous to water according to Appendix 1, point 19.3 of the Environmental Impact Assessment Act, reference is made to the remarks under § 14(7).

Paragraph 1 sentences 1 and 2 require surface pipelines which transport substances that are hazardous to water to have a retention system which contains substances that are hazardous to water in the event of operational malfunctions. This requirement is, however, often impossible in practice, since the pipelines lead over surfaces used for other purposes or traffic routes that are not available as containment facilities. In order to find a way out, sentence 3 opens the possibility to lay down appropriate technical and organisational safety measures on the basis of a specific hazard assessment, with which a level of safety comparable with containment facilities can be achieved. Corresponding technical proposals can be found in the Technical Rule concerning substances that are hazardous to water in worksheet 780 published by the German Association for Water, Wastewater and Waste entitled "Surface pipelines".

According to paragraph 1 sentence 3, in the case of surface pipelines, a retention system can be dispensed with if it is ensured on the basis of a risk assessment, by means of technical or organisational measures, that an equivalent level of safety is achieved. Corresponding requirements pertaining to the risk assessment can currently be found in Technical Rule No. 780 concerning substances that are hazardous to water. These Technical rules concerning substances that are hazardous to water shall not apply to fuel oil consumer installations up to and including hazard level B. In this respect, in the case of these facilities, there is a lack of specific stipulations for a risk assessment. Since, in the case of fuel oil consumer installations which comply with the generally recognised codes of practice (and therefore have an anti-siphon safety device if necessary), only very small quantities of substances that are hazardous to water can escape from a pipeline, by means of sentence 4, a general exemption from the requirements under sentence 1 is appropriate for the pipelines in question.
For pipelines in which substances that are hazardous to water from WHC 1 are transported,

a retention system can be dispensed with, not only if this is the conclusion from the hazard assessment under sentence 3, but also if, under sentence 5, these pipelines do not pass over locations that require special protection because of their hydrogeological characteristics.

Paragraph 2 regulates underground pipelines with liquid or gaseous substances that are hazardous to water which, compared with surface facilities, have a particular hazard potential and therefore need to be technically more elaborately designed and basically should only be used when surface pipelines are not possible. The regulation largely corresponds to that in § 12(2) of the Model administrative instruction concerning substances that are hazardous to water. If, for example, pipelines need to be laid underground on the basis of technical safety regulations, e.g. under airports, in accordance with sentence 2, they must be double-walled, executed as a suction line or laid in protective piping. For pipelines in protective piping, the flashpoint of the liquid must be in excess of 55 °C. This adopts the exemption provision of the GHS [Globally Harmonised System of Classification and Labelling of Chemicals] regulation in Table 2.6.1, which envisages this value and not the otherwise usual 60 °C for gas oil, diesel and light fuel oils. Each of the three alternative regulations should ensure that a leak is recognised promptly and that no substances that are hazardous to water escape into the environment.

The first clause of paragraph 3 contains a special regulation for the pipelines which cannot reasonably hold a retention system and in which only mixtures of water and glycols are contained.

Paragraph 4 determines that for ammonia plants, pipelines in the plant part in which refrigeration is undertaken – e.g. the ice-covered surface – may be constructed with a single wall since here, a double wall would put the actual purpose of the plant into question. Further requirements for ammonia plants emerge from other regulations (e.g. under 10.25 in the Annex to the fourth Federal Pollution Control Act).

As regards pipelines transporting solid substances, paragraph 5 stipulates that no requirements over and above operating requirements are imposed on them. The operating requirements include, in particular, the special material stresses that arise from possible abrasive effects of the solid substances that are hazardous to water on the material of the walls.

Re § 22 (Requirements where wastewater facilities are used as a collection device)
§ 22 regulates the use of wastewater facilities, which may be approved as an exception, for substances that are hazardous to water which escape from facilities.
Basically, facilities handling substances that are hazardous to water must be so equipped and operated that escaping substances are contained in their entirety (§ 17(1) point 3). An inflow of substances that are hazardous to water in a wastewater plant must be prevented, since the wastewater plant in general is not designed to remove the substances that are hazardous to water and it is simpler and more cost-effective to dispose of escaped substances that are hazardous to water in concentrated form. There are, however, cases where this principle cannot be realised. This applies in particular to large industrial parks which operate several facilities in a small area and have a special sewerage system for heavily polluted wastewater from the production process. For these cases, § 22(1) and (2) affords two possibilities for inclusion of wastewater facilities in the safety concept of a facility for handling substances that are hazardous to water

Under the assumptions in paragraph 1, the diversion of a negligible amount of substances that are hazardous to water through the operational sewerage into a suitable wastewater treatment plant is possible during normal operation. This may be the case, for example, during a loss of lubrication in devices and machines. It must, however, be ensured that the substances that are hazardous to water in the operational wastewater treatment plant are removed down to a harmless level and the requirements for direct or indirect inflow are also

met under these operational conditions. These facilities are always suitable when they meet the standards and rules of wastewater technology and it can also be demonstrated that they are impermeable to liquids in the case of the substances or mixtures that are hazardous to water which they encounter for the duration of the load. Public sewers or sewage treatment plants shall not be included.

Under paragraph 2, the substances that are hazardous to water which unavoidably escape from the facility through leakages or operational malfunctions may be contained in a suitable collection tank in the operational sewer system. A collection tank is suitable when it meets the standards and rules of wastewater technology and when it can also be demonstrated that it is impermeable to liquids in the case of the substances or mixtures that are hazardous to water which they encounter in the event of damage for the duration of the load. The aim of these provisions in paragraph 2 is to ensure that the operational sewerage system, if it is included in the safety concept for facilities handling substances that are hazardous to water, can withstand the substances that are hazardous to water and such substances or wastewater cannot escape, and that public wastewater disposal facilities and bodies of water are not affected.

Paragraph 3 stipulates that when one of the two possibilities in paragraphs 1 and 2 are utilised, an assessment is made of possible operational malfunctions, of the facility, of the substances that are hazardous to water that would then be released and of the consequences for the wastewater plant and the bodies of water. On the basis of these findings, the operational instructions under § 45 should regulate how the diversion of substances that are hazardous to water in the wastewater facility is recognised and controlled, how quickly and at what concentrations this needs to happen, and whether the substances need to be kept away from the wastewater or can be allowed to flow into a wastewater facility.

Paragraph 4 specifies that those parts of wastewater plants that are used to contain substances that are hazardous to water within the meaning of paragraph 2 or as per § 19(2) sentence 1 must be impermeable to liquid. Hence, in this instance, the provisions of this ordinance also apply in addition to the regulations concerning wastewater. The plant parts used as a retention system are therefore also covered by the obligation to employ a specialist company and the obligation to inspect (§§ 46 and 47) This clarification is desirable in view of varied discussions during implementation. According to reports from experts who have tested light fluid separators according to Federal State regulations, these sometimes show considerable defects even when newly constructed, thereby placing doubt on the commissioning of the petrol station in question. These facilities are thus frequently installed by companies which are not familiar with the substance. The light fluid separators are partly inoperable, meaning that decidedly expensive and time-consuming measures are required in order to reach an orderly state. Preventing such situations is in the interest of both the operator as well as the manufacturer of these installations. If a wastewater plant is also used as a retention system for substances that are hazardous to water, it does not need to be subject to a fresh expert examination if a corresponding inspection has been made in the same time period under wastewater regulations.

Re § 23 (Requirements pertaining to the capacity of fermentation residue stores in biogas facilities)

A particular characteristic of biogas facilities is that they need to be continuously operated and rapid starting and stopping of the facilities is not possible. For this reason, it must be ensured that the biology in the fermenter is not subject to strong fluctuations. Fermented material must therefore be capable of being lead into the fermentation residue store as required. For this purpose, however, an adequate volume must still be available in this container. The capacity of the fermentation residue store must be dimensioned such that the containers are not overfilled if fertiliser application is not possible. The inadequate storage capacity at the moment is increasingly leading to interim solutions being found and

emergency containers constructed, which fail to meet the current requirements because of the crisis situation and for which there is therefore an increased risk that fermentation residues escape and pollute bodies of water. The experience of increasing bottlenecks in application shows that a capacity of 9 months for the fermentation residue store must be maintained in any case.

Re § 24 (Requirements in terms of filling and draining)
As experience shows, accidents frequently occur during filling and emptying in particular. § 24 therefore sets particular requirements for these procedures, which broadly reflect those in § 19k of the previous version of the Water Resources Act and § 20 of the Model administrative instruction concerning substances that are hazardous to water.

Paragraph 1 corresponds to § 19k of the previous version of the Water Resources Act. The obligations under sentence 1 do not, however, only apply to storage facilities but to all facilities handling substances that are hazardous to water. There was no objective justification for the previous restriction to storage facilities.

Paragraph 2 sentence 1 requires that containers may only be filled through fixed pipe connections while utilising an overfill safety device and only emptied using fixed pipe connections. In the case of manufacturing, treatment or usage facilities and non-connected surface tanks with a volume capacity of up to 1 250 litres, sentence 2 also allows other measures which result in an equivalent level of safety. These may include independently closing trigger guns or weighing equipment which automatically terminate the filling process when the volume of the container and the specified weight of the filled substance that is hazardous to water are reached. Sentence 3 allows overfill protection to be replaced by a volume- or weight-dependent control for the filling of mobile containers over 1 250 litres. The regulation is primarily intended for the filling of tank wagons.

As regards facilities for storing fuels, as defined in the definitions under § 2(11) point 2, diesel, petrol or fuels manufactured from biomass, special provisions shall apply to filling, regardless of their proportions. These facilities are mostly filled from mobile tankers which, in accordance with § 33, do not need to be placed on surfaces impermeable to liquids during filling. As per paragraph 3, these facilities may therefore only be filled with independently closing overfill protection. Fuels are used in motor vehicles or mobile machines or devices whose engines are designed for the use of these fuels. Among the fuels containing substances made from biomass are biodiesel (fatty acid methyl esters), made from plant or animal fats or oils, ethanol and fuel partly made from these substances, as well as vegetable oil fuels whose characteristics at least meet the requirements of DIN 51606. In the case of fuel oil consumer installations up to 1 250 litres, sentence 2 permits filling with independently closing trigger guns, since the otherwise usual safety technology is not available for these small facilities and would be disproportionate.

Re § 25 (Obligations in the event of operational malfunctions; repairs)
§ 25 sets out obligations incumbent upon the operator in the event of operational malfunctions (paragraph 1), obligations incumbent upon the operator and third parties in the event of the escape of substances that are hazardous to water, or where this occurrence is suspected (paragraph 2), as well as the repair of facilities (paragraph 3).

Paragraph 1 requires that facility operators immediately undertake measures for damage limitation if it cannot be excluded in the event of operational malfunctions that substances that are hazardous to water have escaped (sentence 1) and, if necessary, take the facility out of operation if this is the only way to prevent endangering or damaging a body of water (sentence 2). If required, he must drain the facility. There is no fixed volume that must escape from the facility in order to trigger measures for damage limitation. This means that any escape of substances that are hazardous to water requires corrective action. The measures to be initiated depend on the consequences of the leak and must be particularly

rapid and effective, if an adverse charge to the characteristics of bodies of water could follow.

If more than an insignificant amount of substances that are hazardous to water escape into the environment, the facility operator, as well as the third parties identified in paragraph 2 sentence 1, must, under this regulation, inform the competent authority immediately – usually the water authority with responsibility locally – or a police station. The competent authority must be informed even if there is only a suspicion that a hazard to water cannot be excluded (sentence 2). If a third party has caused the leak or undertaken measures to investigate or remove substances that are hazardous to water that have escaped from a facility, he is also required under sentence 3 to report the leak. The obligation for third parties to report is particularly important if a facility operator does not meet his obligation to report any accident. With a view to the correct operation of wastewater facilities or water supply plants, for example, sentence 4 also requires the operator of these plants and other affected third parties to be informed of the leak in terms of the reporting duty under sentences 1 to 3, in order to be able to react to prevent adverse effects on the environment or the drinking water supply. However, this duty is limited to the operator, since he is the only one for whom it can be expected that he has the relevant addresses available. This new, comprehensive regulation in paragraph 2 is intended to bring the number of reported operational malfunctions involving the escape of substances that are hazardous to water closer to the actual conditions. Currently, the competent authorities often tend to get the damage report from the press rather than via direct means.

Paragraph 3 regulates the repair of facilities. This is particularly important, since existing facilities are repaired much more frequently than new facilities are constructed. Investigations by the DIBt show that even for new builds, more than 60 % of all damage can be traced back to faulty planning. In the case of repair, the DIBt estimates the share of faulty planning as even higher. This reinforces the necessity of qualified planning. For a repair, an investigation must therefore first be made of why the disruption has occurred and which parts must be involved in the rectification of the defect. The repair must therefore be planned in due consideration of a condition assessment report and a repair programme drawn up on this basis. As regards a repair, the construction products or systems that are used for new construction of a facility frequently cannot be used. This is because a repair generally does not replace an entire component but builds on the existing component using special appropriate measures. However, not every joint sealant, for example, can be replaced by any other sealing material. An additional regulation whereby, in such cases, also only construction products or systems which have a proof of usability from the building inspectorate can be used, is not required since, in the case facilities for storing, drawing off and handling, such proofs of usability must be available in any case.

Re Section 3 (Special requirements pertaining to retention in the case of certain facilities)

Section 3 defines special requirements for certain facilities, defined below, which vary from those set out in § 18(1) to (3).

Re § 26 (Precedence of the provisions under Section 3)
§ 26 is designed to clarify that for certain facilities, the requirements of Section 3 for the necessity of containment, for the required volume of substances that are hazardous to water to be contained and for the impermeability to liquids of the retention system take precedence over the requirements set out in § 18(1) to (3), which basically apply to all facilities. If a specific facility is not listed in Section 3, the validity of the requirements under § 18(1) to (3) shall continue to apply.

Re § 27 (Special requirements pertaining to facilities for storing, drawing off, manufacturing, treating or using solid substances that are hazardous to water)
§ 27 regulates the special requirements pertaining to facilities for storing, drawing off,

manufacturing, treating or using solid substances that are hazardous to water.

In the case of solid substances that are hazardous to water, it is appropriate to assume that the "duty of care" principle can also be observed even when only one safety barrier is present since, in the event of a leak from a container, solid substances may escape – although generally only in limited quantities – but cannot flow away. In this respect, § 27(1) makes provision for the fact that no retention measures are required if the solid substances that are hazardous to water are kept in containers or packages or in spaces. The area on which the fixed substances that are hazardous to water are handled must satisfy operational requirements. Hence, for instance, the containers or packaging must stand securely and not sink into the ground. However, no requirements under water legislation are imposed on the area. This regulation largely follows § 15 of the Model administrative instruction concerning substances that are hazardous to water in which facilities of a simple or traditional type for storing, drawing off and handling solid substances are regulated. The term “simple or traditional type” comes from § 19h(1) sentence 2 point 1 of the previous version of the Water Resources Act, according to which there is no determination of suitability for these facilities if specific requirements are imposed. The legislator did not adopt the provision relating to facilities of a simple or traditional type in the Water Resources Act of 2009.

Paragraph 2 regulates the different case whereby solid substances that are hazardous to water are not in containers or spaces but handled in tips and the ingress of precipitation cannot always be prevented. In these cases, care must be taken to ensure that an adverse effect on water quality due to substances that are hazardous to water being blown, flooded, washed away or otherwise escaping is prevented. This requirement must also be met under the Federal emission protection regulations (Technical Instructions for Air Quality Control) but is still included here with a view to water pollution prevention. The key measure regarding waterway protection is at least one barrier to prevent contamination, specifically a floor from which precipitation does not escape from the underside of the construction and proper drainage is available. This requirement excludes plastered or water-permeable constructions, but the requirement is not identical to a surface impermeable to liquids since in this instance, the substances that are hazardous to water may only partly penetrate. The reduction in the requirement compared with a surface impermeable to liquids is justified since § 27(2) does not concern the escape of substances that are hazardous to water and penetration into a construction but that precipitation elutes the substances that are hazardous to water from the solid material, thereby resulting in a highly aqueous solution with water-polluting characteristics. The areas normally need to be designed with the corresponding amount of effort for operational reasons as well, in particular the required security of the heavy goods vehicles traffic in the open handling of substances that are hazardous to water. The provision otherwise largely corresponds to the road construction methods required by many Federal States, but has been specified in legal form with respect to the previously undefined requirement level. This regulation only applies to solid substances that are hazardous to water which are not easily soluble. Substances are basically considered to be easily soluble if they have a solubility exceeding 10 g/l. For higher solubility levels, proper drainage is usually no longer possible because of the high content of substances that are hazardous to water in flowing rainwater and the lack of treatment possibilities – apart from the fact that the losses of substances that are hazardous to water are too great for the operator. Solid substances that are hazardous to water from which polluting substances are eluted do not usually fall into the category of easily soluble substances.

Re § 28 (Special requirements pertaining to facilities for storing or drawing off solid substances to which liquid substances that are hazardous to water adhere)

As regards the storage of solid substances to which substances that are hazardous to water adhere - such as debris to which drilling emulsions are still attached - only containment of the volume of liquid substances that are hazardous to water which may collect beneath the stored material on the floor surface is required. The share of solid materials does not need to be included in the calculation of the size of the retention system. Sentence 2 introduces a

simplified provision which has proven successful in some Federal States and which removes the need for a concrete calculation of the amount of liquid materials in question, since the volume is often unknown and cannot be reasonably calculated.

Re § 29 (Special requirements pertaining to areas for handling substances that are hazardous to water)

Paragraph 1 sentence 1 regulates the handling facilities where substances that are hazardous to water are transferred. Since liquid substances that are hazardous to water at these facilities can flow out of unsealed containers and packaging and contaminate the handling area, these handling areas must be impermeable to liquids. However, a specific containment volume is not required. If the precipitation falling at the facility which may be contaminated during operational malfunctions is not disposed of as waste, the required drainage of these areas is undertaken in accordance with § 19(2) sentence 1. For areas on which solid substances that are hazardous to water are handled, § 27(1) sentence 3 shall apply accordingly. No regulation for the open transfer of substances that are hazardous to water can be laid down, since the definition of the concept in § 2(21), apart from the loading and unloading of ships, which is regulated in § 31(1), only includes the reloading of substances that are hazardous to water in containers and packaging.

The implementation of paragraph 2 is designed to settle a frequently hotly argued discussion on whether the shunting and the rails which carry corresponding wagons with loads which are hazardous to water are included in this regard in the ordinance. In this case, however, only transport legislation shall apply, since the shunting does not constitute handling with the corresponding loading and unloading processes.

Re § 30 (Special requirements pertaining to facilities for handling intermodal transport)

To improve legal clarity and avoid competitive distortions, national regulations should also be laid down in relation to facilities for handling intermodal transport.

Handling facilities are not covered by the general "duty of care" principle under § 62(1) of the Water Resources Act. Here, it is sufficient if the best possible protection is achieved for bodies of water against a detrimental impact on their characteristics. Also taking into account the low number of actual accidents in intermodal transport, no particular hazard risk shall be deduced. Since technical and organisational safety measures in conjunction with the law on hazardous goods already ensure adequate protection, the best possible protection for bodies of water is achieved through concrete or asphalt constructions if, in the event of damage, emergency areas or devices which are impermeable to liquid are available. In this way, damaged loading units or road vehicles can be stowed securely and risks posed to the water can be excluded as appropriate.

As a result of the changes proposed, the characteristic features of intermodal transport facilities are taken into account and a specific and proportionate requirement level established in order to guarantee national protection of bodies of water.

Re § 31 (Special requirements pertaining to facilities for loading and unloading ships and to facilities for refuelling water craft)

For the loading and unloading of ships with liquid substances that are hazardous to water, as well as facilities for refuelling maritime vessels, it is unavoidable that the hose or pipe between the ship and the land leads over the surface body of water. The construction of a retention system cannot be achieved with proportionate resources, in particular because the ship moves to a certain extent and a rigid connection is not possible. Facility components installed on land in a fixed manner can, however, provide the otherwise usual containment measures.

Paragraph 1 sets out, in the first instance, the general exemption from shipboard retention. This principle shall apply irrespective of whether the substances are packaged or not. The particular requirements pertaining to the loading and unloading of unpacked liquid substances that are hazardous to water, as well as refuelling (as in the draft as well), are

regulated separately in paragraph 2. The previous paragraph 2 becomes paragraph 3 and provides for the particular requirements in terms of the loading and unloading of bulk cargo.

Re § 32 (Special requirements pertaining to drum and container storage facilities)
In the case of drum and container storage facilities, which also include small container storage facilities, the probability that in the event of an accident, all containers or packages will be simultaneously destroyed and their contents escape is small. Correspondingly small volumes are also anticipated for containers emptied of residue which, in accordance with other legislation, may only contain a residual volume of 0.5 % of the total volume of a container. For this reason, it is justifiable when dimensioning the retention systems not to emphasise the total facility volume. Since it is not possible to predict what liquid volumes could leak out in the event of an accident, the required retention volume is stipulated on the basis of this consideration. In the case of particularly large construction stores or warehouses, more stringent requirements may be imposed in the context of a determination of suitability that may become necessary if larger volumes must be assumed in the event of accidents. A prerequisite for the concept of a reduced retention volume is the fact that the containers and packages are tightly closed and approved under dangerous goods law (point 1), or resistant to the liquids and protected against damage and also against the effects of the weather when located outdoors (point 2) and are therefore secure in a similar manner to point 1 (paragraph 1).

Paragraph 2 then regulates the required retention volume. This requirement corresponds to that under point 2.1.3 of the Annex to the Model administrative instruction concerning substances that are hazardous to water. The sum total of the capacity of all the containers and packaging for which the drum or container storage facilities are designed shall be set as the authoritative volume. The largest volume of the containers and packaging shall be assumed each time in this regard. As regards the capacity of the largest receptacle (row 2, column 2), either the largest container or the largest packaging shall be assumed. The retention system must be impermeable to liquids (§ 18(2)).

According to paragraph 3, in the case of storage facilities with up to 20 litre containers and fully emptied containers where, in accordance with the Technical rules for combustible liquids which are still valid, a residual volume of substances that are hazardous to water not exceeding 0.5 % shall be assumed, only a surface impermeable to liquids to which no specific volume is assigned is required. Even when several of the containers or packages which may contain no more than 20 litres leak, the volume escaping is so small that it will generally remain on the surface. A precondition, however, is that substances that are hazardous to water which have leaked out can be absorbed and disposed of safely using standard equipment (e.g. gritting materials) and that the procedure is laid down in the operating instructions (§ 45(1) sentence 1). This also includes having available the corresponding operational means by means of which the substances that are hazardous to water can be absorbed.

Re § 33 (Special requirements pertaining to areas for drawing off in fuel oil consumer installations)
The areas on which the tankers are parked while a fuel oil consumer installation is being filled cannot be executed in accordance with the provisions under § 18 for practical considerations, since the operators have no influence on how these areas, usually public roads, are designed. As regards fuel oil consumer installations, § 32 therefore dispenses with a filling location design corresponding to § 18(1) to (3) provided increased requirements are observed in relation to the tanker and the hoses. Point 2.2.3 of the Annex to the Model administrative instruction concerning substances that are hazardous to water contains a similar provision.

Re § 34 (Special requirements pertaining to areas for drawing off in certain facilities for using liquid substances that are hazardous to water)

§ 34 contains, similar to the requirements under § 33 regarding areas for drawing off in fuel oil consumer installations, a simplified provision for the areas from where usage facilities are usually filled with liquid substances that are hazardous to water on a one-off basis. This applies, for example, to the filling of hydraulic facilities, transformers with coolants or the tank of an emergency power generator. The cost of a correct design for these areas for drawing off is entirely disproportionate to the risk of an accident.

Re § 35 (Special requirements pertaining to facilities for using substances that are hazardous to water in the energy supply sector and in hydraulic engineering facilities)
Paragraph 1 provides for facilities for energy supply and in hydraulic engineering constructions in which coolant, lubrication or insulating material or hydraulic liquids in WHC 1 or 2 up to a volume not exceeding 10 m3 are used, dispensing with containment or other special requirements arising from paragraphs 2 and 3.

For facilities or facility sections that for reasons of operation or construction cannot be built over surfaces impermeable to liquids, paragraph 2 dispenses with corresponding technical measures. The precondition of this regulation that surfaces impermeable to liquids cannot be constructed does not mean that it has to be completely impossible to construct such a surface. In principle, a retention system can be installed almost anywhere. However, the entire technology and design of a facility would be changed, so all that is meant here is that a retention system impermeable to liquids cannot be constructed if its installation would put the entire construction or technology into question. Energy facilities such as pole transformers or switchgear and controlgear are often built in the open countryside, where a retention system is therefore not possible, since precipitation could also get into this retention system and an orderly drainage under control cannot be carried out due to the absence of personnel on the spot. Encasement of transformers, however, would hinder the cooling. Similarly, it is understandable that no retention system can be foreseen for hydraulic facilities at locks. On the other hand, an operational malfunction shall be noticed at once, meaning that measures can be initiated immediately to prevent water pollution. The precondition for the different regulation is therefore that it is ensured by technical and organisational measures that faults are reported and effective measures are taken.

Paragraph 3 regulates coolers where the coolant is directly channelled past. There are in some cases alternative technical solutions - such as double-tube cooler or two-circuit coolers. However, if these cannot be used, cooler systems at a comparable safety level are permitted. These are to be described in Technical Rule No. 779 concerning substances that are hazardous to water.

Re § 36 (Special requirements pertaining to geothermal probes and collectors, solar collectors and cooling devices)
Paragraph 1 envisages a special regulation for the specified facilities which is described in more detail in paragraphs 2 to 4. Underground facilities and pipelines must be double-walled, as described in § 17(3) and § 21(2), equipped as a suction line, laid out in protective piping or located in a sewer. Use of a double-walled design would, however, contradict the purpose of geothermal energy probes and collectors, since it would interfere with the heat transmission. There is therefore no alternative to a single-walled design. This is, however, only permissible under paragraph 2 if the facility is continuously monitored and switches off automatically in the event of a leak (Sentence 1 point 2). By switching off the circulation pump, the escape of substances that are hazardous to water is largely prevented, since there is then no pressure in the probes and no significant transfer of substances that are hazardous to water into the groundwater occurs against the pressure present there.

Through the limitation of the permissible heat carrier media under paragraph 2 sentence 1 point 3 to substances that are non-hazardous to water and mixtures of WHC 1 which predominantly consist of ethylene and propylene glycol, the risk of groundwater pollution is minimised further. An extension to other substances or mixtures in WHC 1 would go too far,

since this also includes substances and mixtures whose behaviour in the environment, in particular their eco-toxicology and their degradation pattern must be considered more critical than the alcohols. This is at least the case for the heat carrier media suggested up to now.

Solar collectors and cooling devices for the air conditioning of buildings are very frequently arranged outdoors on the roofs of the buildings. Paragraph 3 point 1 specifies that these facilities must be so secured that in the event of a leak from the circulation pump they are switched off and an alarm is issued so that the appropriate corrective action can be taken. To minimise possible water pollution, point 2 only allows substances that are non-hazardous to water or mixtures in WHC 1 whose main component is ethylene or propylene glycol to be used as heat carrier media. Point 3 requires the establishment of the corresponding aggregates on a fixed surface which allows for proper drainage of precipitation (cf. § 19(4)).

Paragraph 4 regulates refrigeration systems with gaseous substances that are hazardous to water in WHC 1. No containment is required for these, since the gaseous substance escape into the atmosphere and corrective action, such as dampening with water, for which containment might be desirable, is not required. Further requirements for the sealing against leaks of facilities that contain coolants follow from Article 3(1) of Regulation (EC) No. 842/2006 (OJ L 161, p. 1) in conjunction with § 3(1) of the Chemicals Climate Protection Ordinance as well as Article 23(1) of Regulation (EC) No. 1005/2009 (OJ L 286, p. 1).

Re § 37 (Special requirements pertaining to underground oil cable and earth cable systems)

In the case of earth cable systems, no hydraulic monitoring is necessary in accordance with sentence 1, since there are no corresponding containers with the oil released from oil cables. Underground oil cables do not have encasements which are impermeable to liquid. Hence, the oil used as an insulating material can find its way into the environment. Oil cables of this design are no longer laid nowadays, but it is often difficult to replace existing ones – aside from the costs involved – because they are no longer accessible due to subsequent construction, for example. As long as these systems cannot be dispensed with, they must therefore be sufficiently well monitored in accordance with sentence 2 that a failure is promptly detected and corrective action can be taken. The regulation is well-established in the city area of Berlin and is now being extended to the whole country.

Re § 38 (Special requirements pertaining to biogas facilities with fermentation substrates of agricultural origin)

§ 38 regulates in paragraphs 2 to 5 the particular requirements for biogas facilities which are exclusively operated with fermentation substrates of agricultural origin. The fermentation substrates referred to here, which must correspond to the conceptual definitions in § 2(8), should be evaluated according to their substance characteristics, like the substances which are handled in liquid manure and slurry installations or silage seepage facilities. Based on this assessment, the implementation practice of the Federal States, which have imposed similar requirements for these facilities as for liquid manure and slurry installations or silage seepage facilities, can be continued. Plants in which other fermentable starting materials can be used, for example waste from grease traps or animals' carcasses or parts thereof not usable for hygienic reasons, have a higher hazard potential and should be constructed according to the general requirements of Chapter 3, without any special regulations allowed as for biogas facilities with fermentable substrates of agricultural origin.

Under paragraph 2 sentence 1, (single-walled) biogas facilities with liquid substances that are generally hazardous to water must be equipped with a leak detection system. The leak detection system must ensure that the release of fermentation substrates or fermentation residues is promptly detected, that the operator can undertake the necessary measures to prevent contamination of the bodies of water. In the case of solid substances that are generally hazardous to water, this leak detection system is not necessary, since the risk

arising from such plants is less. A surface impermeable to liquids, in accordance to sentence 2, including the transition to an upstand is therefore sufficient.

Paragraph 3 requires that all plants, with the exception of stores of solid fermentation substrates, must be inside a surrounding wall which must be so designed that the volumes can be contained that may be released in the event of operational malfunctions until appropriate safety measures can be effective, and at least equal to the volume of the largest container. The requirement of a surrounding wall describes a milder safety level, reflecting the risk potential of these plants and comparable to that which has also been required up to now by most Federal States. In certain rural districts, it is reported that there have been 48 accidents involving biogas facilities over an eight-year period. This is a clear indication that the plant technology to date is not sufficient to prevent accidents or the death of fish extending for kilometres along rivers and streams. Specific requirements for the design of this surrounding wall are not made in this ordinance and no impermeability to liquids within the meaning of § 18(2) is required. Further detail will be determined in the Technical Rules. According to sentence 2, the surrounding wall can also protect several plants according to § 2(14) if this is a simplification from the operational viewpoint, for example. However, an isolated slurry container does not have to be brought into a joint surrounding wall.

Paragraph 4 extends the regulation under paragraph 1 on leak detection and applies it to underground facilities and parts thereof as well which otherwise need to be designed with double walls. In view of the milder requirements for surface plant parts, a corresponding procedure is also appropriate for the underground facilities.

Paragraph 5 affects containers for which the lowest point is under the groundwater table. These containers must be constructed with double walls. However, it is doubtful whether biogas containers will be installed under the water table at all. In the case where the groundwater can reach the underside of the site, the container floor must be on the site. No biogas facilities may be installed in a flooded area, however. The reference point is not the highest measured groundwater level but the highest anticipated groundwater level, not taking extreme events into account. The requirement for double walls for underground containers applies generally to underground containers in water protection areas.

Paragraph 6 governs ground basins. As regards ground basins for the storage of liquid manure, slurry and silage seepage, the Deutsche Institut für Bautechnik ([German Structural Engineering Institute] DIBt) issued a general building inspectorate approval to several applicants in respect of their systems. With these approvals, proof is furnished of the application of the system as defined by the Federal State ordinances. Requirements under water legislation are drafted by the water authorities in the building approval procedure which are designed to afford the best possible protection for bodies of water in accordance with water law. These systems have not proven their worth in practice. According to communications from the Chambers of Agriculture on site and the inspection reports from the experts, significant defects have quite often been detected during inspection. Damage to the plastics in the ground and the slope area, especially in the area of the agitators, and the non-functioning of the mechanical leak detection system were the most frequently identified defects in this regard.
For these reasons, the ban on storing fermentation residues arising from the operation of biogas facilities in ground basins is justified. In particular, a higher level of protection shall be imposed on the storage of these substances than on the storage of liquid manure, slurry and silage seepage (licensed).

Re § 39 (Special requirements pertaining to facilities for handling gaseous substances that are hazardous to water)
§ 39 regulates the special requirements for facilities handling gaseous substances that are hazardous to water.

Basically, it can be assumed in the case of gaseous materials that they escape directly into the atmosphere in the event of a leak and a retention system is technically unpromising in this event. Paragraph 1 removes to this extent the requirement for containment in the case of aboveground facilities. However, for some gases, particularly for reasons of operational safety, there may be cases of substances that are hazardous to water or polluted liquids. These cases are dealt with in the following paragraphs.

Paragraph 2 regulated the cases in which measures for damage detection, containment and recycling are needed on the basis of a risk assessment:

- for pressure-liquefied gaseous substances that are hazardous to water that because of their evaporating characteristics (evaporation enthalpy) are able to escape partly in liquid form with pool formation (point 1). The volume is based here on the possible amount of escaping liquid, in the calculation of which low outside temperatures should also be taken into account. Examples: Ammonia (NH_3), vinyl chloride (C_2H_3Cl), dimethylether (C_2H_6O),
- for gaseous substances that are hazardous to water which create liquid substances that are hazardous to water if they escape because of their solubility (including in cases of fire) and precipitate with water (point 2) Examples: Examples: Ammonia (NH_3), hydrogen chloride (HCl), chloride (Cl_2).

Paragraph 3 introduces a *de minimis* rule for the obligations under paragraph 2. For these relatively small facilities, it can be assumed within the meaning of a *de minimis* rule that the measures for operational safety alone will reach an adequate level of water protection and no risk assessment is necessary.

Re Section 4 (Requirements for facilities depending on their hazard levels)

Re § 40 (Hazard levels of facilities)

§ 40 determines the hazard levels of the facilities, which are derived from the volumes or weights and the water hazard class of the substances and which are the basis for a staged differentiation of the requirements.

The table in paragraph 1 largely corresponds to that in § 6(3) of the Model administrative instruction concerning substances that are hazardous to water, but was modified in view of the *de minimis* rule in § 1(3).

Paragraph 2 regulates how the volumes and weights for the facilities are to be determined. First, the governing volume is the nominal volume of the facility including all plant components from which substances that are hazardous to water could simultaneously escape. However, it regularly occurs in operational practice that the facility is designed for a smaller volume through technical additions or other operational measures which is for these reasons really not exceeded in operation. When the remaining, not usable volume is not included in the operational procedures, it is also inappropriate to take account of it. The decisive volume then corresponds only to that part for which the facility was designed and is technically usable. However, the volumes for which the facility is now equipped must be shown on the container in a form that cannot be changed, so as to prevent manipulation. In determining the decisive volume of a facility in accordance with sentence 2, operational shut-off devices are not taken into consideration. It should thereby be ensured in any case that the total volume of substances that are hazardous to water which might escape in the event of a leak or a break is taken into account for the hazard level. The demarcation of the facility determined by the operator, which is not cancelled by operational barriers within the facility, remains decisive

Paragraph 3 regulates the decisive volume of storage facilities, for which the usable volumes of all containers in the facility may be combined.

Since the container volume cannot reasonably be taken into account in facilities for drawing off, paragraph 4 determines that the volume is derived from the volume stream over 10 minutes of maximum pump performance or from the average daily throughput. The larger volume here should be taken as decisive.

Paragraph 5 determines that facilities where containers and packages are trans-shipped use the volume of the largest container or the largest package to determine the decisive volume. For bulk cargo or loose fillings, the volume corresponds to the largest reloading unit, i.e. for example the volume of the largest bulk cargo or what the largest gripper can accommodate.

Paragraph 6 contains a regulation to determine the decisive volume for manufacturing, treatment or usage facilities. The decisive volume here is also the maximum that can be found in the facility when it is used as intended. In doing so, the technical procedure design must be taken into consideration. Thus, for example, the decisive volume of a distillation tower may be greater than the volume of the distillation tower itself, since substances that are hazardous to water are continuously resupplied to these installations and then similarly released.

Paragraph 7 regulates the volume of pipeline systems which are found in particular in large chemical works. Because of the size of the site, the pipelines extend over long distances, so that in addition to the stream volume, the volume of the substances that are hazardous to water that are in the pipeline can no longer be regarded as negligible and must therefore be added to the volume derived from the stream volume.

Paragraph 8 regulates the special case that fluid substances that are hazardous to water adhere to solid substances. A determination of the volume of the facility on the basis of the volume of the solid substances would be exaggerated, since only the liquid substances that are hazardous to water, e.g. the drilling emulsions for metal chips, are decisive. § 28 sentence 2 lays down a required containment volume also for the case that the volume for the substances that are hazardous to water cannot be determined.

Paragraph 9 regulates the decisive volume for biogas facilities, which is derived from the volumes of all facilities (thus e.g. fermentation substrate store, fermenter and fermentation residue store). This specification corresponds to the wish to see a biogas facility being regarded as the whole plant and not to differentiate according to storage or manufacturing, treatment or usage facilities (cf. also § 2(13)).

If substances in different water hazard classes are handled in a facility, paragraph 10 governs how the water hazard class which is decisive as regards classification in a hazard level is determined. In this regard, the volume of substances in a water hazard class which make up less than 3 % of the total volume stored in the facility is ignored (sentence 1). However, if the substances that are hazardous to water with the highest water hazard class come to less than 3 % of the total volume, the next lowest water hazard class, in accordance with sentence 2, should be used. Thus, if in a facility the volume of substances of water hazard class 3 comes to less than 3 %, water hazard class 2 applies to the facility irrespective of the share of the substances of this water hazard class.

Paragraph 11 states that facilities for handling substances that are hazardous to water may also not need to be assigned to a hazard level, since there may not be the basis for an allocation due to the missing WHC. The requirements which are otherwise staggered according to hazard level are specified for these facilities at the respective places in the ordinance.

Re § 41 (Obligation to disclose)
§ 41 regulates the obligation to disclose in connection with specific systems for handling substances that are hazardous to water.

Paragraph 1 states that the construction, significant modification and measures that lead to a change in the hazard level of facilities requiring inspection must be reported to the competent authority in writing. This gives the competent authority the opportunity to determine whether the requirements of the ordinance have been fulfilled and the technical rules have been observed and whether other location-related regulations, e.g. from the Water Protection Area Ordinance, have been observed. As the previous experience of implementation demonstrates, small businesses and private individuals are often not clear about what needs to be considered in constructing a facility, so that elaborate and expensive improvements are repeatedly required. In addition, the delay in starting operation may lead to substantial restrictions in operational procedure or to loss of revenue. It is therefore in the particular interest of the operator that it should be established in good time whether the facility in this form has been correctly planned and meets the requirements. After receiving the report, the competent authority has 6 weeks to undertake a plausibility test and to refer the operator to specific additional measures or requirements. Information of this kind is very useful for the operator, but it also simplifies the work of the competent authority, since no injunctions need be taken later, which may e.g. delay the start of operation of a facility.

Paragraph 2 regulates the minimum contents of a report, to give the authority a sufficient picture of who the operator is and which facility at what location with which safety features is under discussion. Detailed provisions were not made, since the Federal States differ from each other in the information required in their reporting procedures and partly depend on the corresponding official monitoring programmes. However, determining a minimum to be included saves the authority necessary additional questions and puts them in a position to conduct plausibility checks without further costs.

According to paragraph 3, a notification is unnecessary if a determination of suitability in relation to the facility as per § 63(1) of the Water Resources Act, or approval under other legislation, such as the Federal Pollution Control Act or building law, is required and compliance with the requirements laid down in this ordinance is ensured in the context of this approval. The participation of the competent authority can be ensured through these procedures by internal discussions within the authorities.

Paragraph 4 determines that a change of operator of a facility subject to control must also be reported, since this is the precondition for the competent authority to monitor the adherence to the testing obligations for these facilities. No such report is required for fuel oil consumer installations, since such a requirement would be difficult to make known in the general population and would therefore be ineffective.

Re § 42 (Exemptions from the requirement for a determination of suitability)
§ 42 regulates exemptions from the requirement for a determination of suitability.

§ 63(1) of the Water Resources Act requires a determination of suitability to be made by the competent authority for facilities for storage, filling or transferring substances that are hazardous to water. In addition to the exemptions already included in § 63(2) sentence 1 and paragraph 3 sentence 1 of the Water Resources Act, in accordance with the possibility provided for in § 63(2) sentence 2 of the aforementioned act, paragraphs 1 and 2 set out further exemptions from the obligation regarding the determination of suitability which essentially continue the regulation of facilities of a simple or traditional type recognised in the previous version of the Water Resources Act. The basis for these further exceptions in paragraph 1 is the assessment of a lower risk of these facilities, for which an official pre-assessment can be dispensed with. As already determined in several Federal State ordinances, facilities for storing, filling or transferring gaseous substances as well as liquid and solid substances of hazard class A are exempted (paragraph 1 point 1). Facilities for handling floating liquid substances (point 2) and facilities with substances that are generally hazardous to water which are not subject to a testing requirement (point 3) do not require a

determination of suitability. To reduce bureaucratic regulation, a determination of suitability is also dispensed with under point 4 for fuel oil consumer installations. These facilities should be installed by specialist companies. It can be assumed that the specialist companies that frequently install and service such facilities are familiar with and observe the technical rules to be fulfilled. An additional official inspection is therefore superfluous. The determination that all requirements are satisfied is made after installation by the specialist company by the expert using the principle of dual control. Point 5 continues the regulation of facilities of a simple or traditional type. Insofar as these facilities do not have a volume exceeding one cubic metre and are double-walled or have a containing element which can hold the entire volume of substances that are hazardous to water in the facility, a determination of suitability is not required. Under these preconditions, the inherent safety of the facility is so great that environmental damage cannot occur and therefore an official check whether all safety measures have been taken is unnecessary. The operator remains, however, obliged to implement all measures required by this ordinance for these facilities under his own responsibility.

According to paragraph 2 sentence 1, facilities in hazard level B and C, as well as facilities that are subject to inspection which handle substances that are generally hazardous to water to which no hazard class can be assigned, do not require any determination of suitability if approvals are available for all parts of a facility under other regulations, e.g. building law, which take account of water protection and an expert report confirms that a facility which satisfies all requirements can be operated with the interaction of all these plant parts. The competent authorities have 6 weeks after receipt of this documentation to refuse the installation described or to lay down requirements with which proper operation can be ensured. This regulation is a compromise between the individual regulations which existed up to now in the Federal States and allows intervention by the authority without obliging the authority to carry out determinations of suitability. All in all, the situation is made easier in the majority of Federal States as a result of this provision.

According to paragraph 3, the competent authority may also disregard a determination of suitability for facilities in hazard level D if these facilities fulfil the requirements under paragraph 2 sentence 1. This also includes corroboration by an expert of the fact that the facility, which comprises the individually approved plant parts that are used, fulfils the requirements under water legislation in its entirety. This is intended to satisfy the wish for procedural simplifications for these facilities as well. However, these facilities in hazard level D to do not have the right of exemption from a determination of suitability.

Re § 43 (Application documents for the determination of suitability)
§ 43 describes what documentation must be submitted for a determination of suitability. By way of deviation to most Federal State regulations hitherto, sentence 2 only requires a report from an expert if the competent authority demands this. This can in particular be expected if the technical construction and the safety features can be operated foreseen for the facility cannot themselves be conclusively judged and the procedural simplifications of § 42(2) and (3) have not been used by the operator.

Re § 44 (Documentation relating to the facility)
§ 44 regulates the documentation relating to the facility, as well as the availability of the documentation that the expert or specialist companies need as the basis for their work under § 48 or § 46.

Paragraph 1 assumes that every operator of a facility must have facility documentation containing the most important information. Such documentation is a matter of course for a responsible operator and also corresponds to what has been set out for years in Technical Rule No. 779 concerning substances that are hazardous to water entitled "General Technical Regulations" under point 6.2. The extent of such documentation depends on the complexity of the facility. However, documentation that is no longer available need not be acquired

afresh (see § 69(1) sentence 2).

An important element of expert inspections and during work on a facility is adequate familiarity with the details of the facility including the provision of permits and the results of past inspections. It is evident from the reports of the expert organisations in recent years on the inspections carried out that the inspections were made significantly more difficult because the operators on just these points were unable to give sufficient information about their facilities. Paragraph 2 therefore requires that the operator must keep the documentation required for the stated purposes available. This includes in particular, under paragraph 2 sentence 2, the determination of suitability, proofs of usability from the building inspectorate, as well as the most recent inspection report. The objective of this regulation is that no doubt should exist about which regulations are made for a facility and that e.g. it can also be checked whether identified flaws in a facility have been removed. The separation of the documentation according to paragraph 1 and the documents as per paragraph 2 is due, on the one hand, to the fact that paragraph 1 refers to all facilities while paragraph 2 only to those that are subject to inspection. In addition, it should be ensured that the decisive documentation under paragraph 2 are readily available during an inspection and do not need to searched for among other documentation. There is of course no objection to the operator keeping the respectively required documentation together.

Paragraph 3 determines that the documentation specified under paragraph 2 must be provided on request to the competent authorities, e.g. during on-site inspections, to the experts prior to an inspection and to the specialist companies prior to corresponding work on the facility.

Paragraph 4 opens the possibility for EMAS location, in the sense of § 3 point 12 of the Water Resources Act, to maintain the required information in an environmental statement or an environmental operation inspection report, instead of the required facility documentation. This possibility requires a special extension of this documentation with respect to the safety-relevant characteristics of the facility.

Re § 45 (Operating instructions; instruction sheet)
§ 45 regulates the operating instructions (paragraphs 1 to 3) and, for certain facilities, the instruction sheet (paragraph 4), on which basis the operating personnel should ensure safe operation of the facility.

In addition to the technical requirements and the detailed facts about the facility and its safety features, particular importance is given to the prompt consideration of which measures to take in case of accident and which technical and organisational measures are to be kept in readiness for this. Paragraph 1 sentence 1 therefore requires that operators of facilities must prepare a plan for supervision, maintenance and emergencies with an indication of the actions to be taken immediately to prevent dangers. This document can, for example, be based on Technical Rule No. 779 concerning substances that are hazardous to water and correspondingly contain the previous and next expert inspections, required instructions to specialist companies, special site information and safety features which may be important in the case of accident. In particular, it should specify direct contact persons with telephone numbers who are also reachable on Sundays and holidays and prepared measures should be determined that can be implemented at short notice in the case of accident. Sentence 2 specifies that the plan should be agreed with those individuals who will participate in measures in the event of an accident, so that if it occurs, everyone is aware what needs to be done, where the relevant devices and other aids are stored, and how access is provided. Sentence 3 requires that the operator must ensure that the operating instructions are adhered to. The information must also be kept up to date.

Paragraph 2 stipulates that at regular intervals, at least once a year, the operating personnel must be instructed in how to act when handling the facility according to the operating

instructions (sentence 1) and that the execution of this instruction must be documented (sentence 2).

Paragraph 3 states that the operating instructions must be accessible for the operating personnel at all times. Both regulations in paragraphs 2 and 3 are intended to ensure that the operating personnel can intervene in the case of danger, without first having to search for the relevant instructions and to consider what needs to be done.

In order the reduce the burden on operators, paragraph 4 sentence 1 suspends the requirements under paragraphs 1 to 3 for facilities with low risk (hazard level A, petrol stations for own consumption, fuel oil consumer installations, facilities for handling floating liquid substances with a volume up to 100 m^3 and facilities with solid substances that are hazardous to water up to 1 000 tonnes). Instead of the operating instructions, sentence 2 requires that an instruction sheet with the required operational and behavioural instructions should be placed in an easily visible place in the facility. It is to be assumed that the risk potential for these facilities is relatively small and no special alarm procedures are required, so that it is possible to rely on a simplified form of the operating instructions. For these facilities, there are also usually no continuously occupied control rooms, adjustable safety features or special disaster plans, so that no regulations are required for these. The required information in the instruction sheet can therefore be limited in particular to the facility itself and information for the expert inspections, operational duties and for companies the operational contact persons in the case of accident and the emergency numbers so that they can also be reached on Sunday and holidays, and to this extent the information can be generalised. This instruction sheet for fuel oil consumer installations and other facilities can be found in Appendices 3 and 4. The instruction sheet must be affixed in the vicinity of the facility so that the instruction sheet and the facility can be related to each other. Should several facilities be installed together, the instruction sheets relating to the alarm procedures and emergency numbers in particular, for example, can be summarised.
Sentences 3 and 4 introduce a further simplification to these regulations, for the case that the most important information in accordance with Appendix 4 is documented by other means in the vicinity of the facility. This is intended to prevent duplicate or multiple notices. Sentence 4 states that it is sufficient for open-air facilities of hazard level A which are located away from settlements to indicate a telephone number to which an operational malfunction should be reported. This is intended to make it possible for alert members of the public to report damage.

Re § 46 (Obligation to employ a specialist company; exemptions)
In § 46 the safety-related works on facilities for handling substances that are hazardous to water that must be carried out by specialist companies in accordance with § 63 are set out in more detail (paragraph 1) as well as exceptions to the so-called specialist company requirement (paragraph 2).

Paragraph 1 lays down that certain facilities for handling substances that are hazardous to water may only be constructed, internally cleaned, repaired or decommissioned by specialist companies. This is to ensure that the facilities which have a particular risk potential are constructed and operated in accordance with the requirements of the ordinance and the technical rules and that products are only used as envisaged by the vendor. In addition, quality assurance must be carried out. Experience shows that many operators, especially in medium-sized enterprises, do not necessarily themselves have the relevant knowledge but nonetheless are still independently active. In addition to deviations from the desired situation of importance for safety, this also often leads to premature signs of wear and tear, requiring retrofitting. The specialist company requirement is therefore also in the interest of the operator. However, compared with the Model administrative instruction concerning substances that are hazardous to water, the extent of activities has been reduced and, on the one hand, the maintenance has been taken out while, on the other, the cleaning has been replaced by internal cleaning. Measures for freely accessible parts of the facility may

thereby also be carried out by the undertaking's own personnel.
Under point 5, the biogas facilities must be mentioned specifically since they are not covered by the hazard levels, in any event if fermentation substrates of agricultural origin for producing biogas are used. For biogas facilities with other fermentation substrates, a special regulation would be superfluous, since these can be assigned to the hazard levels and are therefore subject to the regulations in points 2 and 3. Points 6 and 7 also make the handling facilities in intermodal transport, as well as the facilities for handling floating liquid substances, subject to the special company requirements. These facilities need to be separately mentioned here since they are not classified in hazard levels and therefore do not come under points 2 or 3.

Paragraph 2 allows activities that have no relevance to safety also to carried out by non-specialist companies within the meaning of § 63 (e.g. non-approved installation companies). This represents a simplification compared with the Federal State requirements applicable hitherto. A specification of the activities that have no immediate significance for facility safety is envisaged in Technical Rule No. 779 concerning substances that are hazardous to water.

Re § 47 (Operator's monitoring and inspection duties)
§ 47 regulates the monitoring and testing of facilities by the operator himself as well as by an external expert in accordance with § 2 point 33.

Paragraph 1 sentence 1 requires the operator to monitor the sealing of the facility, as well as the functionality of the safety devices, at regular intervals. The frequency of monitoring is not specified in further detail as the frequency depends upon the interaction of the substances that are hazardous to water with the materials used, the risk from the facility and special site characteristics. However, the monitoring must be at regular intervals and sufficiently frequent that damage to the facility is recognised promptly and corrective action taken before the bodies of water are contaminated. This monitoring requires a certain degree of expertise. As this is not present for every user, the competent authority is empowered in paragraph 1 sentence 2 to require the operator to commission the regular monitoring from a specialist company. The provision in paragraph 1 sentence 1 essentially corresponds to that in § 19i(2) sentence 1, while the provision in paragraph 1 sentence 2 entirely corresponds to that in § 19i(2) sentence 2 of the previous version of the Water Resources Act. By way of deviation from paragraph 1 sentence 1, § 19i(2) sentence 1 of the Water Resources Act required that the facility be monitored continuously. Since continuous monitoring was sometimes interpreted to mean that the facility must be continuously in the view of the operator, regular monitoring is now required, allowing for appropriate periods when no monitoring is taking place.

Paragraphs 2 and 3 state that an operator, after specifying the times and intervals for inspection in Appendices 5 and 6, must instruct experts outside and within protected areas and check protected or provisionally secured flood plains. The operator can select freely between the approved expert organisations and, if it is beneficial for him for operational reasons for example, sub-divide surveys into individual tests. This can for example be sensible in the case of large storage surfaces for solid mixtures, so that the stored mixtures do not need to be rearranged and then tested when the storage surface is accessible. In the inspection report, the conclusion of the test of a facility with all partial tests must, however, be recorded in accordance with § 48(3) sentence 3 point 9. Testing obligations on the basis of other legislation (e.g. seal tests according to Article 3(2) of Regulation (EC) No. 842/2006 or Article 23(2) of Regulation (EC) No. 1005/2009) are unaffected.

Paragraph 4 gives the competent authority the option to arrange an expert inspection of all facilities regardless of announced inspection times and intervals, in particular when there is a concern about an adverse change in water characteristics. In cases of dispute, the competent authority should thereby be able to refer to a neutral, external report before taking further steps.

Paragraph 5 obliges the operator of facilities where an inspection showed a significant or dangerous defect which has been corrected in the meantime to allow a further inspection by an expert. This further inspection is to ensure that the defect was correctly removed and that the facility can be operated without restriction.

Paragraph 6 point 1 releases certain facilities which are operated for the purposes of research, development or testing from the inspection by an expert. The regulation corresponds to § 23(3) of the Model administrative instruction concerning substances that are hazardous to water.

Paragraph 7 makes it clear that special regulations for monitoring or to inspect facilities in a determination of suitability are unaffected. The same applies to further-reaching legislation, for instance in the approval of a construction product being used.

Re § 48 (Inspection by experts)
§ 48 regulates who may carry out inspections and what should be observed in the process.

Paragraph 1 determines that tests in accordance with § 47(2), (3), (4) and (5) may only be carried out by experts.

Paragraph 2 determines that the expert should classify the facility in his report as satisfactory or as a facility with minor, substantial or dangerous defects. This classification and its definitions stem from the findings of the Federal States in the approval by expert organisations and is established practice.
A facility which is free from defects complies with all the requirements under water law. In a facility with minor defects, safety is not substantially affected and the escape of substances that are hazardous to water from part of the facility or a failure of the security features is not to be anticipated before the next regular inspection. Substantial defects affect the facility security to the extent that there is concern that an acute risk to water may occur before the next regular inspection. The effectiveness of the plant components that contains substances that are hazardous to water or the containment features including the related safety features are not adequate. In the case of dangerous defects, there is concern over an acute water risk until the defect is removed.

Paragraph 3 requires the competent authority to be informed by the expert within 4 weeks of the result of his inspections. In the case of dangerous defects, the competent authority must under sentence 2 be informed immediately, in other words without negligent delay, normally on the same or next day. These regulations are intended to put the authority into a position to monitor the adherence to the inspection obligations and to issue any necessary instructions to the operator. Sentence 3 regulates the minimum content of the inspection report. It is important that there is no doubt in the minds of the authority which facility has been inspected, whether the inspection was completely carried out or some partial tests still need to be made, the results of the inspection, whether for a supplementary inspection all established defects had been removed and how the inspection result should be assessed, in particular with a view to necessary repair measures. However, a repair concept cannot be expected as part of an expert inspection. In order to inform the authority personnel quickly and to allow easier transfer into a monitoring file, sentence 4 specifies that certain information on the first page of the inspection report must optically stand out. Generally, in order to make work easier, electronic transfer shall be preferred. At present, however, provision has not yet been made for appropriate ways in the case of the expert organisations or the competent authorities.

Paragraph 4 obliges the expert, during an inspection of a fuel oil consumer installation which reveals no or only minor defects, to affix a notice on the facility in an easily visible location, where the date of the inspection and the next planned inspection can be seen. This

regulation is intended to give those delivering fuel oil a certain confidence that the facility that they want to fill at least satisfied the technical requirements at the time of the inspection. The obligation under § 24(1) sentence 1 to satisfy themselves about the correct state of the safety features is thereby made easier.

Paragraph 5 obliges experts to give the instruction sheet prepared in accordance with Appendix 3 to the operators of fuel oil consumer installations during the inspection. Private operators are often insufficiently familiar with changes in laws and regulations, so that he will not notice that the instruction sheet which is current hanging on his facility is no longer up to date and refers to a currently invalid legal situation. In order to maintain a situation in line with current law, the expert should give the private operators the explanatory notes if they have an old explanatory note or no explanatory note at all, since the Federal State law did not envisage this requirement.

Re § 49 (Rectification of defects)
§ 49 regulates the rectification of defects identified during the expert inspection.

Paragraph 1 requires that the facility operator organises the removal of the defects found during the expert inspections or undertakes it himself if he fulfils the necessary requirements. He has 6 months to do this for minor defects, but substantial and dangerous defects require immediate action. An injunction from the authority is therefore not necessary. This regulation provides a substantial simplification for operators and authorities, since after the ordinance takes effect, defects found can be removed on the operator's own initiative and do not need to await a usually expensive injunction.

In the case of hazardous defects, the facility must be taken out of operation immediately in accordance with paragraph 2 sentence 1 and, if the expert deems it necessary to prevent probable harm to water, drained. The facility may in this case under sentence 2 only be put back into operation when the expert has confirmed the correct state of the facility and the inspection certificate has been provided to the competent authority. Paragraph 2 is to ensure that in the case of dangerous defects any further risk arises from operation of the facility is excluded and the facility is brought into a condition that prevents the escape of substances that are hazardous to water into the environment. On the basis of the imminent danger it is justified that the required measures are not only undertaken after an injunction from the authority but that they take immediate effect.

Re Section 5 (Requirements for facilities in protected areas and flood plains)

Re § 50 (Requirements for facilities in protected areas)
For facilities in areas especially worthy of protection under water legislation, § 50 imposes particular requirements which are designed to reduce the risk of contamination of bodies of water, in particular reducing the adverse effects on the production of drinking water for the public. The regulations largely correspond to those in § 10 of the Model administrative instruction concerning substances that are hazardous to water.

Under paragraph 1, the establishment and operation of facilities for handling substances that are hazardous to water is not permissible in the protected area or the immediately surrounding protection zone of water and mineral spring protection areas. Since a construction ban is usually in place in these protected zones under the Protected Areas Ordinance and this regulation also corresponds to the previous facility ordinances in the Federal States, no change results from this ban.

Under paragraph 2, the establishment and operation of the facilities indicated there, which constitute a particular risk for the raw water of the waterworks, is not permitted in the extended zone. These bans correspond to points 1 and 3 of § 10(2) of the Model administrative instruction concerning substances that are hazardous to water.

Point 2 prohibits biogas facilities with a volume exceeding 3 000 m^3. The volume mentioned refers to the total volume of the biogas facility, which consists, in particular, of the volume of the facilities for storing the fermentation substrates, for producing biogas and for storing the fermentation residues. According to § 38, these facilities do not have retention systems, just a surrounding wall, so that in principle, it cannot be ruled out that part of the substances that are generally hazardous to water may seep out in the event of operational malfunctions. In view of the possible residues of veterinary medicines and disease bacteria in the slurry, which cause concern for the public water supply, at least the large plants must therefore be kept away from the protected areas. The volume limit also applies to biogas facilities in which other – more critically seen from the scientific viewpoint – fermentation substrates are fermented.
Point 4 also bans geothermal probes in protected areas. This ban shall not apply to private facilities, since § 62(1) of the Water Resources Act only includes manufacturing, treatment or usage facilities in industry and in public institutions. The existing provisions in the protected area ordinances of the Federal States relating to these facilities vary greatly, in which connection the provision laid down here is a compromise between the bans which exist under Federal State law. The ban on geothermal probes is primarily justified by the fact that these underground probes may, under § 36(2), be constructed with a single wall and, to this extent, have no retention system, while corrective action is not possible either. Regardless of handling of substances that are hazardous to water, these facilities reach deep into the ground and can at sufficient depth penetrate the covering layers protecting groundwater. The boring, as well as the backfilling of the borehole, lead to further risks, meaning that a ban on these facilities in protected areas is appropriate with a view to minimising risk for the public water supply.
Sentence 2 prohibits any extension of existing facilities to the extent that they exceed the limits specified in sentence 1. This guarantees the current position for these facilities but rules out extension above the limits foreseen. Since the issue here is the protection of the public water supply, the same level of requirements must apply to all facility operators. Sentence 3 is designed to ensure that livestock farmers resident in the broader zone of protected areas are also able to continue utilising the energy potential of the farm manure which accumulates in connection with the animals they keep for the production of biogas. As a result of the envisaged volume restriction, especially in the case of middle- and large-scale animal husbandry, the extensive fermentation of the slurry (including solid manure) which accumulates in any case could otherwise be excluded. Based on the fact that as a result of anaerobic fermentation, the hygienic status of animal excrement is demonstrably improved, a raised hygiene risk in this regard compared with the status quo is not to be feared.

Regardless of the bans on facilities under paragraph 2, in accordance with paragraph 3 sentence 1, all permissible storage and manufacturing, treatment or usage facilities must be constructed in such a way that that the maximum volume of substances that are hazardous to water which are present in the facility can be collected in their entirety. They must therefore either be erected with a retention system, the volume of which corresponds to the facility (point 1), or must be double-walled and have leak detection capability (point 2). For facilities for drawing off and handling, this provision shall not apply, since the requirement for full retention does not make any sense in this case. It would, for example, in the case of a petrol station, lead to the entire volume of the store container or, in the case of handling facilities, the volume of all containers and packages in the location needing to be contained.

Sentence 3 excludes the facilities mentioned in Section 3 from the requirements laid down in paragraph 3 sentence 1. This exemption provision must be narrowly defined in reference to the particular need to protect the production of drinking water in water protection areas.

Over and above the requirements mentioned in Section 3, primarily in the case of drum and container storage facilities (§ 32) in protected areas, a greater retention volume would appear necessary. The stipulations under § 32(2) and (3) are not sufficient in protected areas.

As regards facilities for handling gaseous substances that are hazardous to water (§ 39), a

risk assessment shall also be carried out in the case of facilities below the *de minimis* threshold as per § 39(3), within which framework the particular need to protect the installation site has to be taken into consideration for stipulating the measures required in a given case.

Furthermore, a general exemption for facilities using substances that are hazardous to water in the energy supply sector, which can be released from the retention measures as per § 35(1), is unacceptable in protected areas on account of the particular hazards as regards the production of drinking water. The upper limit specified in the exemption provision under the Ordinance on facilities for handling substances that are hazardous to water of a capacity of such substances up to water hazard class 2 of 10 m^3 yields hazard level B. According to the Bavarian administrative instruction concerning substances that are hazardous to water and the Bavarian model ordinance for water protection areas, for example, such facilities are not permitted without collection areas which have a retention volume of 100 % of the volume of the facility. In the case of pole transformers alongside bodies of water and in protected areas, utility companies in Bavaria, for example, use enclosed structures so as to prevent soil and water pollution in the event of leaks.

The possibility of inspecting these facilities on a case-by-case basis as to whether, and to what extent, simplification measures are possible shall not be affected. An exemption in a given case is possible at any time in accordance with § 50(4) of the ordinance under the preconditions mentioned therein.

In special cases, it may be necessary to allow exemptions from the strict requirements in protected areas. If the public interest so requires or the requirement would impose unreasonable hardship for the facility operator, the competent authority may issue exemptions under paragraph 4. This might for example be the case for a ban also applying to a waterworks on constructing a chlorination plant in the protection zone and the closer protected area. Exemptions are, however, only permissible if the purpose of protection of the respective protected area regulation is not undermined (cf. §52(1) of the Water Resources Act).

Under paragraph 5, the requirements as per paragraphs 2 and 3 shall not apply when more extensive regulations have been laid down in the protected area ordinances under Federal State law. The identification of protected areas and the regulations to be observed therein are particularly oriented to the special local hydrogeological conditions and vary between the Federal States and the Protected Areas ordinances, in some cases quite markedly.

Re § 51 (Requirements pertaining to facilities in defined and provisionally secured flood plains)

§ 51 demands special measures for facilities in defined or provisionally secured flood plains according to § 76(2) and (3) of the Water Resources Act, by means of which the release and floating away of substances that are hazardous to water should be prevented.

Paragraph 1 generally regulates that all facilities in defined or provisionally secured flood plains must be so constructed and operated that substances that are hazardous to water do not float away or become released even in the event of flooding or in any other way enter a body of water or a wastewater facility. No detailed technical regulations are given in the ordinance, since in view of their complexity these are better located in the Technical Rules.

Paragraph 2 empowers the competent authority, as under § 50(4), to allow exemptions from the requirements of paragraph 1 in particular cases in flood plains as well.

Paragraph 3 enables Federal States, *inter alia*, to approve structural works in accordance with § 78(3) of the Water Resources Act. In other respects, more extensive regulations in Federal State ordinances for the protection of flood plains are unaffected.

Re § 52 (Distance to wells for drinking water, springs and bodies of water above

ground)
§ 52 regulates a minimum distance to wells for drinking water, springs and bodies of water above ground for biogas facilities with fermentation substrates of agricultural origin. This special requirement stems, on the one hand, from the fact that these facilities do not have the otherwise conventional retention systems. On the other hand, it is frequently the case in agriculture that depots have their own wells. For these wells too, however, the possibility of faecal bacteria and active endocrine substances finding their way into the drinking water must be excluded. The required distance of 50 m to the wells for drinking water does not correspond to the standard, and professionally recommended 100 m in Regulation W 101 of the of the German Technical and Scientific Association for Gas and Water. However, implementation of this distance is generally agreed to be regularly impossible, since the wells are generally built in the vicinity of the farm buildings and are often not possible to move. An exemption from the specified distance under sentence 2 is permitted if the operator achieves corresponding protection by other means. This is the case, for example, if the wells or bodies of water lie in the direction of flow of the groundwater above the facilities and it is therefore impossible, even in the case of release, for substances that are generally hazardous to water which have leaked out to reach the wells.

Re Chapter 4 (Expert organisations and experts; quality control and monitoring bodies and specialist assessors; specialist companies)

Chapter 4 contains regulations on expert organisations and experts, quality control and monitoring bodies and specialist assessors, as well as specialist companies

Re § 53 (Approval of expert organisations)
To lighten the burden on facility operators and administration, experts should continue to be able to supervise facilities (see § 48) and thereby ensure that the facilities are constructed and operated correctly. It is therefore necessary to lay down requirements for the individuals involved and their organisations. The provisions in § 53 continue and extend the concept, already established in Federal State law on the basis of § 22 of the Model administrative instruction concerning substances that are hazardous to water, of recognition by authorities of expert organisations which appoint and develop further experts for performing facility inspections, taking account of requirements, in particular those of Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the single market (the Services Directive).

Paragraph 1 describes the tasks of expert organisations and, by comparison with the corresponding provision in § 2(1) sentence 1 of the Model administrative instruction concerning substances that are hazardous to water, extends the area of activities of expert organisations explicitly to include the monitoring of specialist companies (point 2). This does not constitute a change compared with current enforcement practice, since expert organisations have also already monitored hitherto specialist companies on the basis of § 19l(2) sentence 1 point 2 of the previous version of the Water Resources Act. Expert organisations are, however, only authorised to monitor specialist companies if the approval under point 2 also extends to this. Otherwise, the expert organisation is only entitled to carry out inspections under § 47(1a) or to prepare reports (point 1b). However, no limitation of the area of activity of expert organisations to the monitoring of specialist companies is envisaged. The requirement of recognition of the expert organisation corresponds to § 22(1) sentence 2 of the Model administrative instruction concerning substances that are hazardous to water.

Paragraph 2 regulates the equal standing of equivalent approvals from other Member States of the European Union or other Signatory States to the Agreement on the European Economic Area, including the associated provisions governing proof. The need to approve expert organisations constitutes an approval regulation or authorisation requirement which, according to Article 9(1a) or Article 16(3), in conjunction with paragraph 1a, of the Services

Directive, is only permitted if this does not lead to discrimination against service providers on the basis of their nationality or the location of their offices. Paragraph 2 sentence 1 prevents this type of discrimination by putting equivalent approvals in other Member States of the European Union or other Signatory States to the Agreement on the European Economic Area on an equal footing with German approvals. The provisions in sentences 2 and 3 make use of the option foreseen in Article 5(3) of the Services Directive to require the presentation of copies or translations of documents. The competent authority can also demand a notarisation; the exception of compelling reasons of public interest envisaged in Article 5(3) sentence 2 of the Services Directive is satisfied here (in particular public safety and environmental protection).

Paragraph 3 sentence 1 regulates the approval requirements for expert organisations, based on § 22(3) of the Model administrative instruction concerning substances that are hazardous to water and comparable provisions in other legislative areas (cf., for instance, § 6(2) of the Pipeline Ordinance) and also draws on the instruction sheet of the Working Group of the Federal States on water on the principles behind the approval of expert organisations under § 22 of the Model administrative instruction concerning substances that are hazardous to water and on specialist companies (as at:. March 2005).
Point 1 confirms explicitly that an expert organisation to be recognised must identify a natural person who is authorised to represent the organisation. Such a regulation is necessary as it is decisively important for the approval authority to have a contact person who can officially respond to all approval-related questions, be held responsible and also be responsible for the payment of fees. The organisation must demonstrate on the basis of corresponding documentation, such as its organisation statutes, that the contact person has been legally assigned the right to represent them. This is also to ensure that an organisation to be approved does not consist of individuals who have come together but undertaken no responsibilities and who could therefore quickly separate again. Points 2, 4 and 6 correspond to the provisions in § 22 of the Model administrative instruction concerning substances that are hazardous to water.
Point 3 has the objective that an organisation should always have a large number of experts. The minimum figure of 5 experts mentioned in the instruction sheet from the Working Group of the Federal States on water has essentially proven itself and should be continued in this regard. However, a binding regulation is not possible under European legislation. However, the supplement in the second clause is important: that the appointed experts are bound by the professional guidance of the technical management board. For the currently existing expert organisations, the tradition has developed that many experts are not permanently employed by the organisation but engaged as consultants and may also be linked by cooperation agreements to other organisations. The question of employment is not significant in terms of water legislation. What is important, however, is the clarification that appointed experts are bound by the instructions of the technical management board of the organisation. They can refuse a commission, but not carry out a commission which differs from the instructions of the organisation. The organisation is responsible for this technical dependency relationship and can also be called to account for it (cf. § 55(1) point 2).
The newly-introduced professional quality assurance system in point 5 is derived from the monitoring system for experts of the instruction sheet from the Working Group of the Federal States on water. It provides the basis for the correct preparation, execution and documentation of the tests and the supervision by the organisation of the expert commissioned for the facility inspection. According to sentence 2, it is designed to ensure that tests take place at a uniform level and in a similar form and that the overall conduct of the tests from the time of commission to registration is handled in an orderly and comprehensible manner. It is also necessary for this purpose that inspection reports are correctly completed and justified objections are also corrected by the authorities. Care must also be taken in accordance with sentence 3 that the experts are included in a regular flow of information and demonstrate their abilities through tests on reference facilities.

Previously, a prerequisite for the approval of expert organisations was, *inter alia*, a declaration of indemnity in favour of the Federal States in which experts conduct inspections

(cf. § 22(3) point 6 of the Model administrative instruction concerning substances that are hazardous to water; § 18(3) sentence 1 point 6 of the Bavarian administrative instruction concerning substances that are hazardous to water). Following the clarification made by the Federal Ministry of Justice to the *Bundesrat* in the run-up to the forwarding of the ordinance that official activity on the part of the experts under the administrative instruction concerning substances that are hazardous to water shall be assumed within the meaning of public liability law and, as a result, the threat exists of public liability claims, the provision concerning indemnity against liability under point 7 of the Model administrative instruction concerning substances that are hazardous to water has to be incorporated again.

The inclusion of this additional precondition does not contravene the Services Directive either, since it is non-discriminatory and is necessary on environmental protection grounds.

Furthermore, as a result of the clarification made by the Federal Ministry of Justice, the conclusion must be drawn that the currently envisaged legal entitlement to approval is again transformed back into a "discretionary provision", as has already been provided for under § 22(3) of the Model administrative instruction concerning substances that are hazardous to water and § 18(3) sentence 1 of the Bavarian administrative instruction concerning substances that are hazardous to water. Since the experts work in an official capacity, there cannot be any legal entitlement to approval. Rather, approval is at the discretion of the competent authorities which carry this out obligatorily. When exercising the right of discretion, the rejection of an expert organisation which fulfils all the requirements only comes into consideration in an exceptional case where specific reasons exist for this.

If the application for approval covers the right to carry out the certification of companies under § 63(1) sentence 1, in accordance with sentence 4, the requirements relevant to the approval of quality control and monitoring bodies as per § 58(3) sentence 1 points 3 and 4 must also be satisfied. This means that uniform requirements apply to all positions supervising specialist companies.

Paragraph 4 sentence 1 applies when, although no equivalent approval within the meaning of paragraph 2 has been issued, proofs do exist regarding the fulfilment of certain requirements according to paragraph 3 sentence 1 which have been issued in another Member State of the European Union or in another Signatory State to the Agreement on the European Economic Area. The provision serves to transpose Article 5(3) (Approval of certificates) and Article 10(3) (Ban on duplicate controls) of the Services Directive. This ensures that certificates from another Member State of the European Union or another Signatory State to the Agreement on the European Economic Area which are equivalent to German certificates shall be regarded as indeed being equivalent. With regard to sentence 2, reference is made to the remarks under paragraph 2 sentences 2 and 3.

Paragraph 5 regulates the incidental provisions with which the approval can be issued. The clarifying regulation in sentence 2 serves to transpose Article 10(4) of the Services Directive; the provision corresponds to the current legal position under Federal State law (see § 22(2) sentence 1 of the Model administrative instruction concerning substances that are hazardous to water).

Paragraph 6 sentence 1 serves to transpose Article 13(3) of the Services Directive. The provisions of § 42a of the Act on administrative procedures regarding the assumption of approval cannot be applied in the approval procedure in accordance with Article 13(4) of the Services Directive since this is necessary for compelling reasons of public interest (in particular public safety and environmental protection). Sentence 2, in conjunction with the provisions of Part V, Section 1a of the Act on administrative procedures, serves to transpose Articles 6 to 8 of the Services Directive.

Paragraph 7 adopts § 22(4) of the Model administrative instruction concerning substances that are hazardous to water unchanged. The provision opens the possibility for larger

companies in particular with the necessary internal expertise to carry out internal testing and to provide the necessary organisational structure for this. The prerequisite, in addition to fulfilment of the preconditions governing approval under paragraph 3, is that the organisation constitutes an independent entity not constrained by instructions with respect to its inspection work. It does not, however, need to be a fully independent unit outside any organisational structure of the company.

Re § 54 (Appointment of experts)
§ 54 sets out which preconditions have to be fulfilled by the experts in order to be appointed by the organisations. Points 1, 2, 4 and 5 in paragraph 1 sentence 1 adopt § 22(3) sentence 1 point 1 of the Model administrative instruction concerning substances that are hazardous to water. This allows the required knowledge of the decisive legal provisions (point 5) in particular through successful participation in corresponding courses. A new element is the requirement for a state of health sufficient to carry out the tests correctly (point 3). This was included because tests in the inside of a container, for example, which can often only be undertaken with protective safety equipment, are also very physically demanding and therefore require an adequate state of health. Point 6 prevents an expert from being commissioned by several expert organisations and thereby having to satisfy several provisions or instructions at once. This does not, however, mean that cooperation between two organisations is impossible. However, an expert in this case also remains bound by the instructions of the organisation that has appointed him. The possibility should not, however, be excluded that an expert appointed by a foreign organisation may also be appointed by a German expert organisation. This primarily provides an improved communication opportunity, since the German authority has a direct contact person available.
In order to make it easier for the competent authority to check the requirements in points 1 to 6, sentence 3 obligates the expert organisations to show that the requirements have been fulfilled in an appointment file for each individual expert.

Paragraphs 2 to 4 are largely taken from § 6 of the 41st Ordinance implementing the Federal Pollution Control Act (Disclosure Ordinance– 41. of 2 May 2013, Federal Law Gazette I p. 973). They specify the fact that the reliability as per paragraph 1 sentence 1 point 1 is not a given if provisions under pertinent areas of law have not been observed and the expert has therefore had a legally-binding sentence imposed or has been penalised with a fine in excess of EUR 500. The same shall apply if the expert's behaviour is in serious breach of his duties.

The new provisions in paragraph 5 specify the requirements in terms of the technical expertise and experience required in paragraph 1 point 4 and draw on the instruction sheet from the Working Group of the Federal States on water regarding the principles concerning the approval of expert organisations as per § 22 of the Model administrative instruction concerning substances that are hazardous to water and on specialist companies (as at: March 2005). The decisive factor for the qualified testing activity of an expert is that he understands the technical connections of the facility and knows the technical background for the selected plant technology. Facilities for handling substances that are hazardous to water consist of a variety of components which are technically very different and, in some cases, very complex in their construction. This includes, for example, elements of process control technology/measurement and regulatory technology, steel construction, corrosion protection, plastic technology and concrete construction. The expert needs to be able, for each of these components and their interaction, taking the current condition during the inspection into account, to make a prediction of whether defects could occur before the next regular inspection. A corresponding forecast must, for example, be carried out in accordance with Technical Rule No. 789 concerning substances that are hazardous to water regarding the expected working life of the still permitted single-walled underground pipelines. This forecast has to make a reliable statement regarding interference-free operation until the inspection after next in 10 years. Such statements can only be made with sufficient confidence if the corresponding theoretical background knowledge has been demonstrated by a successful

conclusion to studies in an engineering or scientific subject. This background knowledge is, in particular, also needed for the approval activity for the new construction of a facility or when reviewing an existing facility in order to identify possible weaknesses in the facility which could lead to the failure of individual components. Professional qualifications are considered equivalent if they are sufficient to allow the construction, maintenance and support of a facility falling under the provisions of this ordinance in accordance with the regulations applying to the trade. This is also especially the case when proof of a sworn public appointment as an expert for a relevant field can be furnished. The university education must be supplemented by practical activities both in the area of planning, construction or operation of a facility, as well as in the testing thereof (sentence 2). This experience is especially necessary in order to be able to follow why a particular technical solution in a facility has been selected, and in order to also then be able to find a way to test the facility for defects. Especially in the case of facilities for handling substances that are hazardous to water, the expert must decide in the individual case exactly what needs to be tested and which test methods should be employed.
The requirements under paragraph 5 are also satisfied if the studies according to sentence 1 were successfully concluded abroad or the experience as per sentence 2 was acquired abroad.

The expert has a very important role in the enforcement of the ordinance. Expertise and practical experience are crucial as regards carrying out the duties assigned to him in a professional manner. Also with a view to protecting the expert organisation which appoints him, it is therefore necessary to satisfy oneself prior to the appointment of the expert. This can only happen by means of a test, which is called for in sentences 3 and 4. Concrete stipulations are not laid down in relation to the test, however.

On the grounds of equal treatment, paragraph 6 adopts the regulation in § 59(2) sentence 1 where the opportunity is opened for specialist assessors of the quality control and monitoring bodies to be appointed in individual cases even when the requirements for professional knowledge and experience are not fully satisfied.

Paragraph 7 determines that after an appointment has been made, the expert should be given an appointment letter. This is designed to enable him to demonstrate his status to third parties, in particular facility operators. A more detailed stipulation of the appointment letter was consciously dispensed with.

Re § 55 (Revocation and expiry of approval; expiry of experts' appointments)
§ 55 regulates the revocation and expiry of an approval and the expiry of an expert's appointment.

Paragraph 1 regulates the preconditions under which approval can be revoked. The reasons for revocation identified in points 1 to 4 are in addition to the reasons for revocation under § 49(2) sentence 1 point 2-5 of the Act on administrative procedures. They give the competent authority the option to intervene in cases where doubts exist over the conduct of correct inspections for technical, organisational or personal reasons and to avoid possible damage which could be caused by inspections not correctly carried out and consequent failure to undertake repair works. It is not envisaged that the authority will intervene directly regarding individually appointed experts, but that this will always be done through the organisation.

Paragraph 2 sentence 1 clarifies the fact that in the cases mentioned therein, approval by the expert organisation shall also lapse. Sentence 2 gives the competent authority the option to approve an organisation again, even if just for a limited period.
The expiry of the expert's appointment when the organisation is dissolved, or the decision to initiate insolvency proceedings, is designed to bring about a situation where individuals may not undertake inspections of facilities or supervision of specialist companies without being part of an organisational framework and technical information exchange. In the case of

defects that were not detected during the inspection of a facility or supervision of a specialist company and which resulted in damage, it must be ensured that compensation claims are successful.
If insolvency proceedings are opened, there is a basic concern that the organisation was not reliable. It is possible to imagine, however, that an enterprise may be insolvent, for example, but that the organisational unit working independently as an expert organisation has nothing to do with the problems that have arisen. In paragraph 2 sentence 2, the possibility is afforded that in such cases, the approval of the expert organisation may be maintained for a limited period. In this way, the insolvency proceedings are not to be provided with an additional burden.

Paragraph 3 sets out the cases where the appointment of the experts expires.

Re § 56 (Obligations incumbent upon expert organisations)
§ 56 sets out the obligations incumbent upon expert organisations.

Paragraph 1 sentence 1 point 1 regulates the duty of the organisation to rescind the appointment of an expert under certain preconditions. This is designed to ensure a neutral inspection in accordance with the required duties. Under point 2, the appointment or the expiry of an expert's appointment, as well as any change in his areas of activity, is to be notified to the competent authority within 4 weeks.
It is also part of the normal work of an expert organisation to make spot checks as to whether the expert is carrying out the inspections correctly (point 3) and to take part in an annual exchange of experiences with the technical boards of all expert organisations (point 5). The exchange of experience internally (point 4) does not unconditionally presuppose personal participation by all experts; the exchange can also take part through the use of appropriate media (telephone or video conference). It is also part of the further duties of an expert organisation to collect and assess the experiences gained during the inspections (point 4) and to report on them to the competent authority (point 6c). The report must reach the competent authority by 31 March of the following year, so that the authority can derive the necessary steps from these experiences. In addition, the report may be used in an evaluation of the ordinance, building on the experiences acquired during the inspections. The report must, as per point 6, also contain changes to the organisational structure, the principles of the inspections, an overview of the inspections carried out by the experts, as well as the experiences acquired during the inspections. This provision is designed to put the authority in particular in a position to detect significant changes in the expert organisations, to judge the quality of the work, and to also be able to intervene in cases of doubt. Points 7 and 10 ensure that the authority is informed of a change in the person representing the expert organisation and of the dissolution of the organisation. This ensures continuity in the event of a change in the contact person and that the authority can recognise when experts whose organisations have been dissolved are continuing to inspect independently. Point 8 requires that both the technical management board and the appointed experts regularly take part in further training events. During the inspection of facilities, the introduction of technical rules and the development of the law to be observed, of the construction products and methods of construction, as well as the safety technology must be familiar in order to reach an outcome corresponding to current requirements each time. This requires participation in further training events where the rules being presented can also be subject to questions. Point 9 regulates the maintenance of trade and commercial secrets by the organisation. Point 10 states the duty of notification when an expert organisation is dissolved.
As regards expert organisations which are entitled to certify and monitor specialist companies, § 62 shall also apply, just as it does in relation to quality control and monitoring bodies.

Re § 57 (Obligations incumbent upon appointed experts)
Paragraph 1 obliges the expert to document his inspections in a log, describing the type, extent and results of the tests. This information should make it possible to assess the

experience of the expert and his degree of specialisation. The log may also be maintained electronically, provided changes to the documents and the database remain traceable.

Paragraph 2 emphasises the obligation incumbent upon the expert to protect trade and commercial secrets.

Re § 58 (Approval of quality control and monitoring bodies)
§ 58 transfers into water law the provisions contained in the Federal State ordinances up to the mid-1990s regarding quality control and monitoring bodies approved under building law. Since the discontinuation of the provisions under building law, a legal basis no longer exists for approving and monitoring these quality control and monitoring bodies. On the other hand, there still remains a practical need for quality control and monitoring bodies to undertake testing and monitoring functions with respect to specialist companies. Against this background, the structure introduced by § 19l(2) sentence 1 point 2 of the previous version of the Water Resources Act, according to which the status as a specialist company presupposed either the conclusion of a monitoring agreement with a technical supervisory organisation or the entitlement to display a quality mark from an approved quality control and monitoring body, is essentially continued (see § 63). However, it should be unimportant whether a specialist company is certified by an expert organisation or a quality control and monitoring body, meaning that no difference in quality level can become established. The requirements for the quality control and monitoring bodies are, in this respect, the same as for the expert organisations.

Paragraph 1 sentence 1 stipulates that quality control and monitoring bodies which appoint the specialist assessors to certify and monitor specialist companies require approval by the competent authority.

Paragraph 2 corresponds to the provision for expert organisations. In this respect, reference is made to the explanatory statement regarding § 53(2).

In paragraph 3 sentence 1, it is determined what requirements the quality control and monitoring body must fulfil in order to be approved, drawing strongly on the preconditions for approval of expert organisations under § 53(3) sentence 1 points 1 to 3 and 5. These requirements relate in particular to the person who is authorised to represent (point 1), the suitability of the technical management board (point 2) and of the persons employed by the quality control and monitoring body as specialist assessors (point 3), the professional right to issue instructions of the technical management board (point 3) and the operational quality assurance system (point 5). Point 4 requires principles to be respected in the certification and monitoring of specialist companies. Reference is made to § 53(3) regarding the explanatory statement.

Paragraph 4 contains provisions regarding the equal standing of equivalent certificates from other Member States of the European Union or other Signatory States to the Agreement on the European Economic Area. Reference is made to the explanatory statement regarding § 53(4).

Paragraph 5 sentence 1 makes it possible for the quality control and monitoring bodies to specialise in specific fields of expertise. This accommodates the current structure of these quality control and monitoring bodies, which have specialised in certain fields, such as refrigeration and air-conditioning technology or chemical plants, and which operate across the entire Federal territory of Germany. This avoids the need to train personnel for activities which will never be applied. Sentence 2 sets out the incidental provisions through which approval can be provided. The clarifying provision in sentence 3 serves to transpose Article 10(4) of the Services Directive.

Paragraph 6 regulates the approval procedure. Reference is made to the explanatory

statement regarding § 53(6).

Re § 59 (Appointment of specialist assessors)
Paragraph 1 regulates the requirements for the individuals who carry out the certification and monitoring of specialist companies, drawing strongly on § 54(1) sentence 1 points 1, 2, 4 and 5. They must be reliable, independent, technically expert and sufficiently experienced, and not appointed by several quality control and monitoring bodies at the same time. These requirements are designed to ensure that certification and monitoring are carried out in a technically qualified and neutral manner. As with the expert organisations, technical expertise requires a successful conclusion to studies in an engineering or scientific subject in a technical area related to the activity to be carried out. Professional qualifications are considered equivalent if they are sufficient to allow the construction, maintenance and servicing of a facility falling under the provisions of this ordinance in accordance with the provisions of trade and industry law. This is also especially the case when proof of a sworn public appointment as an expert for a relevant field can be furnished. However, no requirement is laid down for the experience expected of individuals appointed to inspect facilities, since this is not relevant to specialist assessors. In order to facilitate the checking of requirements by the competent authority as per paragraph 1, their fulfilment under sentence 5 must be documented in an appointment file.
Special requirements governing expertise under other legal acts (e.g. § 5 of the Chemicals Climate Protection Ordinance, § 5 of the Chemical Ozone Layer Ordinance) are unaffected.

The specialist assessor has a very important role in the enforcement of the ordinance. Expertise and practical experience are crucial as regards carrying out the duties assigned to him in a professional manner. Also with a view to protecting the quality control and monitoring body which appoints him, it is therefore necessary to satisfy oneself prior to the appointment of the specialist assessor. This can only happen by means of a test, which is called for in sentences 5 and 6. Concrete stipulations are not laid down in relation to the test.

Paragraph 2 opens the possibility of deviating from the requirements pertaining to the requisite expertise according to paragraph 1 sentence 1 point 3 and sentence 3 with the consent of the competent authority. This accommodates the special structure of the quality control and monitoring bodies, where these requirements for specialist assessors who only cover a certain technical field, e.g. heating construction, may not always need to be satisfied in full. It may be desirable here to create a possibility to appoint a specialist assessor even where other preconditions are satisfied. For this purpose, individuals particularly come into consideration who have a professional qualification as a state-approved technician in a relevant technical field or who have completed a relevant apprenticeship to obtain a master's qualification. This is also especially the case when proof of a sworn public appointment as an expert for a relevant field can be furnished. However, this exemption option does not apply to the technical management board.

Similar to the provision relating to experts in § 54(7), paragraph 3 makes provision for the handing over of an appointment letter to the specialist assessor after he has been appointed so that he can demonstrate his status to a specialist company.

Paragraph 4 allows the quality control and monitoring body to enter into cooperation agreements with other quality control and monitoring bodies or expert organisations and thereby draw on specialist assessors from these organisations. In particular, for quality control and monitoring bodies operating nationwide, the cost of sending their own specialist assessor to a specialist company which is distant from the headquarters of the quality control and monitoring body in order to check the results of the practical work undertaken by the specialist companies would be excessive. In this case, it may be appropriate if a corresponding inspection is carried out by a specialist assessor from a quality control and monitoring body or expert organisation based nearby. This inspection may, however, only be carried out according to the technical stipulations regarding certification and monitoring of the specialist companies by the quality control and monitoring body for which he works. In

particular, the specialist assessor must adhere to the principles of the quality control and monitoring body that he is working for and he must also be included in the quality assurance system. This ensures that the entire responsibility remains with the certifying quality control and monitoring body.

Re § 60 (Revocation and expiry of approval; expiry of the appointments of specialist assessors)
§ 60 regulates the preconditions for the revocation and expiry of the approval of the quality control and monitoring body, drawing strongly on the corresponding provision for expert organisations in § 55. This is designed to prevent a situation whereby the quality level of the quality control and monitoring body drops, tasks are no longer carried out adequately and, hence, the efficient inspection of the specialist companies is no longer guaranteed. Reference is made to the comments under § 55.

Re § 61 (Obligations incumbent upon quality control and monitoring bodies and specialist assessors)
§ 61 sets out the obligations which a quality control and monitoring body must fulfil within its organisation so that it can perform its tasks correctly.

Paragraph 1 point 1 lays down the obligation on the part of the quality control and monitoring body to rescind the appointment of a specialist assessor under certain preconditions. In addition, it must notify the competent authority within 4 weeks of the appointment, or the expiry of the appointment, of a specialist assessor (point 2).
Moreover, the quality control and monitoring body is obliged to inform the competent authority by 31 March of the following year of possible organisational changes (point 3) and it must communicate any change in the authorised representative to the competent authority in accordance with point 4. According to point 5, the quality control and monitoring body must ensure that the technical management board and the appointed individuals participate in further training events at least every 2 years. Point 6 requires that provision is made for an internal exchange of information at least 4 times a year. Not every specialist assessor must necessarily attend these internal information exchanges, since there may be organisational reasons why this exchange is organised regionally or with the help of modern media. However, an exchange of experience is required for every specialist assessor, particularly in view of the fact that these specialist assessors are not part of a structure in which they can regularly meet and exchange information. The provision therefore facilitates a rapid and organisationally guaranteed exchange of information and experiences between the staff of a quality control and monitoring body. Point 7 makes provision for an annual exchange of experiences between all participating quality control and monitoring bodies, as with the expert organisations. These may be held jointly with the expert organisations. This external exchange assists in the coordination of technical positions, the exchange of new discoveries and the adoption of a comparable approach in similar cases. No particular form of organisation is laid down. Point 8 determines that the quality control and monitoring body must protect trade and commercial secrets, while point 9 stipulates that the dissolution of the quality control and monitoring body must be reported to the competent authority.

Paragraph 2 regulates the protection of trade and commercial secrets by the specialist assessors.

Re § 62 (Common obligations of the expert organisations and the quality control and monitoring bodies)
§ 62 sets out the obligations which both the expert organisations and the quality control and monitoring bodies must fulfil in the certification and monitoring of specialist companies.

Under paragraph 1 point 1, it must be verified at least every 2 years, and whenever there is reason to do so, whether the specialist company satisfies the staff- and equipment-related and organisational requirements under § 63(2). The outcomes of the inspections must be

documented in this regard. In accordance with point 2, the findings obtained from the inspections of the specialist companies must be collected, assessed and communicated to the competent authority by 31 March of the following year in accordance with point 3. According to sentence 2, the inspections conducted by the expert organisations and the quality control and monitoring bodies shall at least include a review of the outcomes and the quality of the practical work carried out by the specialist company, a review of whether the company personnel take part in internal or external training sessions or in further training events on a regular basis, and a review of whether the business continues to have suitable devices, tools and testing facilities at its disposal in order to be able to carry out its activities properly and safely. These obligations are designed to lead to quality assurance as regards the work undertaken by the specialist companies, to professional development and to the creation of transparency. A review of the practical work undertaken by a specialist company cannot be dispensed with since the specialist companies are specifically certified on account of the special requirements in terms of practical work and the expert or specialist assessor is to get a realistic idea of how the specialist company works. As a result of the duty to report, the competent authority shall be put in a position to identify particular developments in the work of the specialist companies and to intervene if necessary.

Paragraph 2 obligates the expert organisations and the quality control and monitoring bodies to carry out training of the person responsible within the company and of the staff involved in the fields in which the specialist company is active. This training must be offered in accordance with § 63(2) sentence 2 on the layout and mode of operation of the facilities, their hazard potential, the characteristics of the substances that are hazardous to water, the legal stipulations and the processing of construction products and components. In this regard, particular emphasis is to be placed on the fact that the training should not only instruct the owner of the specialist company but also the personnel responsible and those involved on how the construction products or components are to be incorporated or processed, i.e. what requirements have to be observed in terms of installation, the subsoil, ambient conditions during processing, required waiting times or the tools and technical devices required so that optimal safety levels can be developed by means of these products or components.

In accordance with paragraph 3 sentence 1, the expert organisations and quality control and monitoring bodies must publish in a suitable manner on the internet the specialist companies it is monitoring which work on behalf of third parties. This form of publication shall entail relatively little expense for the organisations, can easily be kept up to date, and is designed to give operators an easy way of selecting a suitable specialist company. In accordance with sentence 2, status as a specialist company may be restricted to certain activities, according to the respective field of activity of the company, such as metalworking, installations, painting and coating work. According to sentence 3, this specialisation must be specified in the announcement.

Paragraph 4 obliges the expert organisations and quality control and monitoring bodies to withdraw certification from a specialist company immediately if it has repeatedly carried out work that must be performed by a specialist company incorrectly, no longer satisfies the requirements pertaining to personnel, equipment and organisation under § 63(2), fails to fulfil the training obligations under § 64(1) or does not fulfil the obligation as per § 64(2).

Re § 63 (Specialist companies, certification of specialist companies)
§ 63 sets out the requirement for certification as a specialist company (paragraph 1), the preconditions which a specialist company must fulfil in order to be certified (paragraph 2) and the issuance of a document following certification (paragraph 3).

Paragraph 1 sentence 1 stipulates that a specialist company must be certified by an expert organisation or quality control and monitoring body. Specialist companies bear a particular responsibility regarding the safety of a facility for handling substances that are hazardous to

water and must also therefore possess particular knowledge which needs to be demonstrated in the context of certification. There has been repeated criticism of the quality of the work of specialist companies over many years, something which can also be attributed to the fact that a not insignificant proportion of newly constructed facilities exhibit defects during the commissioning test. The ordinance therefore attaches particular importance to quality assurance in the specialist companies in that the certification not only looks at the equipment of the companies but also the ongoing further training of staff and their practical work. Sentence 2 affords the opportunity to restrict certification to certain activities. This is of particular interest to several specialist companies since they can therefore specialise in, for example, the construction of fuel oil consumer installations or tank cleaning without having to furnish proof of other competences. According to sentence 3, certification is limited to 2 years. This is the time period during which the expert organisation or quality control and monitoring body shall undertake a new inspection as per § 62(1) sentence 1 point 1 and thereby check whether a specialist company is organisationally and technically up to date. Renewed certification of specialist companies is possible.

Paragraph 2 stipulates that a company can only be certified if it satisfies the following technical, staff-related and organisational preconditions: Under point 1, it must have the necessary technical devices and equipment parts. Point 2 determines that at least one person responsible within the company must be appointed who has successfully completed a period of training, has 2 years of relevant experience, has sufficient technical and legal knowledge, and has demonstrated proof of this in an examination. In these examinations, adequate knowledge must at least be furnished in relation to the layout and mode of operation of the facilities, their hazard potential, the characteristics of the substances that are hazardous to water, the legal stipulations and the processing of construction products and components. No specific form of examination is specified. Its arrangement is left to the examining body.
In view of the variety of tasks to be undertaken by specialist companies, it is not possible to prescribe generally specific training courses, especially as for some activities – such as the cleaning of facilities – no special training courses are offered. In accordance with point 3, the staff working on site must have the skills required for the activities envisaged. This includes the requirement that they should have been instructed in the special conditions under which individual components or construction products have to be installed. This may also be effected in the form of qualified training undertaken by the manufacturers, who can thereby ensure that their products are used in the manner envisaged. Under point 4, the specialist companies must create working conditions under which correct execution of the tasks is guaranteed. This is important, for instance, in the event that a product requires an extended hardening time and the work can therefore only continue after a certain period of waiting.

Paragraph 3 obligates the expert organisation or quality control and monitoring body to issue a document to the specialist company following certification which shall show, in particular, the name and address of the specialist company, the name and address of the expert organisation or quality control and monitoring body, the field of activity of the specialist company and the period of validity of the certification. This document serves as proof for the operator of a facility or, if applicable, the competent authority, that this is, in fact, a specialist company (cf. § 65).

The requirements pertaining to specialist companies under paragraph 2 are requirements to be examined within the meaning of Article 15(2d) of the Services Directive. To avoid impermissible discrimination as defined by Article 15(3a) of the Services Directive, paragraph 4 puts companies which satisfy the requirements under paragraph 2, and which are entitled to carry out work in another Member State of the European Union or in another Signatory State to the Agreement on the European Economic Area which would require a specialist company under German law, on an equal footing with specialist companies, provided the monitoring carried out in the other country is at an equivalent level.

Re § 64 (Obligations incumbent upon specialist companies)
§ 64 sets out the obligations of specialist companies.

Paragraph 1 stipulates that the person responsible within the company must take part in further training events at least every 2 years, while all personnel involved must take part in such events on a regular basis, so that these individuals remain aware of current developments. The requirements for the person responsible within the company are thereby higher than for the personnel involved, since the person responsible within the company must maintain an overview of developments in related legal areas and of new technical developments that may not necessarily be important for every individual working in the specialist company.

Paragraph 2 obligates the specialist companies to keep the supervising expert organisation or quality control and monitoring body informed about changes to the organisational structure, including, for example, any change to the person responsible within the company. Irrespective of the inspections carried out by specialist companies in accordance with § 62(1) sentence 1 point 1, these organisations should therefore be put in a position to be able to react to changes in the specialist companies and thereby ensure that the requirements are satisfied.

Paragraph 3 determines that an enterprise which has its certification withdrawn must return the certificate and cease to use it. This is designed to prevent improper use of the certificate.

Re § 65 (Proof of status as a specialist company)
§ 65 requires that proof of status as a specialist company must be furnished to the facility operator without being asked (sentence 1) and at the request of the competent authority (sentence 2). In accordance with sentence 3, the presentation of the certificate or a certified copy thereof shall constitute proof. According to the first clause of sentence 4, similar obligations to furnish proof shall apply to enterprises from other Member States of the European Union that are comparable to specialist German companies. Before embarking on activities which are obligatory for specialist companies, these must furnish proof of their entitlement and the equivalent inspection under § 63(4) and, at the request of the authority, also present a certified German translation of these proofs.

Re Chapter 5 (Regulatory offences, concluding provisions)

Chapter 5 regulates the standard regulatory offences and transitional provisions, as well as the entry into force.

Re § 66 (Regulatory offences)
§ 66 includes offences which could result in a fine with respect to breaches of obligations under this ordinance. The elements of the offences listed under points 17, 18, 25 and 27 are a continuation of the corresponding offences which could result in a fine in accordance with § 41(1) point 6 letters c, d and e of the previous version of the Water Resources Act. The other elements of the offences largely correspond to existing regulations concerning administrative fines under Federal State law (cf. also § 27 of the Model administrative instruction concerning substances that are hazardous to water). In addition, the offences which could result in a fine as regulated in § 103(1) points 7 and 12 of the Water Resources Act shall apply.

Re § 67 (Existing classifications of substances and mixtures)
§ 67 stipulates that already existing classifications of substances and mixtures shall continue to apply. In order to produce clear documentation of all classified substances that are hazardous to water and to improve user-friendliness, these existing classifications are published again in the Federal Gazette. In addition, a search function is available on the internet by means of which the classification of individual substances, substance groups and

mixtures can be retrieved. The classification of mixtures may only continue to be published if the composition of the individual substances present in the mixture is documented as well. A publication of products without indicating the substances present is therefore not possible.

Re § 68 (Changing the classification of substances that are hazardous to water)
According to § 68, the operator of a facility handling a substance that is hazardous to water which has been classified in a different water hazard class does not have to fulfil the new requirements that would follow. It cannot be assumed that operators regularly determine whether and which substances that are hazardous to water have been newly classified. The requirements which result from a change to the classification of substances that are hazardous to water therefore only apply on the basis of an order from the competent authority. This provision applies both to facilities which had already been erected when this ordinance entered into force (existing facilities) and to those erected following the entry into force of the ordinance, but where reclassification was undertaken even later.

Re § 69 (Existing facilities that are subject to recurrent inspections)
§ 69 contains a transitional provision for existing facilities which are already erected when this ordinance enters into force on the basis of the Water Resources Act and supplementary Federal State regulations and which are subject to a recurrent inspection obligation.

Requirements under this ordinance, which merely constitute organisational and administrative provisions, such as the supervision of filling and emptying, obligations in the event of operational malfunctions, obligations to disclose or documentation and operating instructions, shall apply as soon as the ordinance enters into force in accordance with paragraph 1 sentence 1 point 1. The same applies under point 2 for all other requirements laid down in the ordinance, insofar as they comply with the requirements which already had to be observed on the basis of the respective provisions under Federal State law. If a final approval is available for a facility, this shall apply as a provision under Federal State law in accordance with point 2, second clause. In these cases, the continued existence of old facilities does not require a transitional provision. Sentence 2 determines that for existing facilities, the documentation only has to be supplemented to the extent that is possible with proportionate means. Decisions, type approvals or proofs of stability which are no longer available need do not therefore have to be acquired retrospectively. In the case of decisions, this would only be possible by a search in the archives; for reports, etc. this possibility generally also ought to be excluded since it is not certain whether these reports have been archived, nor is it known in which archives they may still be found.

Paragraph 2 requires that the expert, when inspecting an existing facility, notes in his inspection report any deficiencies present which are established in terms of the lawful condition of an existing facility. During the inspection, he shall use as a basis the final notification or the provisions under Federal State law in relation to the facility. In this respect, nothing changes in terms of the expert inspection during the transition from Federal State law to Federal law.

Paragraph 3 sentence 1 stipulates that the expert, when inspecting an existing facility for the first time under the Federal ordinance, should establish whether and to what extent, new requirements under this ordinance that go beyond the previous requirements under Federal State law shall apply to the facility. A comparison shall therefore follow of the previous Federal State law and the new Federal law by way of a purely legal review. Documenting the deviations is only required once, which is why the expert is obliged to undertake it during the first inspection following the entry into force of the ordinance. No direct consequences shall follow the establishment of a deviation in the documentation. Establishment of a deviation is designed, however, to inform the operator of a facility in good time about necessary future adaptation measures that may be required so that he can consider possible retrofitting measures. By means of the inspection report, the competent authority is also informed at the same time about more extensive requirements under the new ordinance (sentence 2) and

thereby put into a position to discuss possible measures with the operator. The documentation relating to the deviation must be presented to the competent authority together with the inspection report in accordance with sentence 2. This documentation, however, is not part of the inspection report.

According to paragraph 4 sentence 1, the competent authority can order technical or organisational measures by means of which the operator shall remedy in full the deviations established (point 1) which correspond to those regarded as appropriate for these cases under the technical regulations (point 2), or by means of which equivalence to the more extensive provisions of the ordinance is achieved (point 3). The stipulations of the Water Resources Act relating to the level of protection must be observed in the case of orders as per points 2 and 3 according to sentence 2 above.

According to paragraph 5, the authority may not order the decommissioning or abolition of facilities, or the performance of adaptation measures, which equate to the new construction of the facility or which alter the original purpose of the same. Therefore, the new installation of a collection pan beneath an existing facility is not possible if, to this end, the facility existing previously has to be demolished and then rebuilt in the collection pan, even if this is possible at all. Similarly, the replacement of a rail in the ballast bed with a similar one in the collection pan is not possible during ongoing operation of a handling facility. It is also not possible to limit a handling facility in which both hazardous and non-hazardous goods were handled previously to the handling of non-hazardous goods. In this connection, in accordance with § 105(3) sentence 1 of the Water Resources Act, the provision made to safeguard existing standards in terms of the determination of suitability for old facilities, where the determination of suitability in accordance with § 105(3) sentence 1 of the Water Resources Act has been bridged, must be observed. This means in particular that no new determination of suitability is required. Requirements which are regulated in a former determination of suitability shall still apply if fulfilment of the new requirements under this ordinance is not technically feasible, i.e. decommissioning of the facility would be necessary. In this case, the legal effect of the former determination of suitability (facility approval) would otherwise be circumvented. This amounts to nothing more than making provision to safeguard existing standards, however. Retrofitting obligations in the case of approved existing projects also otherwise exist with respect to other water resource management projects (cf. for instance, § 57(4) and (5), § 58(3), § 60(2), § 34(2) and § 35(2) of the Water Resources Act).

Paragraph 6 obligates the operator to observe the requirements laid down in the ordinance when rectifying substantial and hazardous defects in containers or retention systems. Especially when containers are replaced or during the new construction of retention systems, i.e. the most important parts of a facility in terms of water pollution control, adaptation in line with current requirements is usually possible without substantial financial or technical investment.

For existing facilities, in accordance with paragraph 7, the more extensive technical requirements laid down in this ordinance shall apply immediately in the event of modifications to key structural parts or safety devices. In these cases, retrofitting of the facility and its technology is usually possible and proportionate with minimal difficulty if the parts of the facility in question are being renewed or replaced. Key structural parts or safety devices are not modified, for instance, if a coating is improved or a piece of pipeline replaced.

Paragraph 8 stipulates that facilities that were regarded as simple or traditional in accordance with Federal State regulations, and which were therefore legally constructed and operated without a determination of suitability (see § 19h(1) sentence 2 point 1 of the previous version of the Water Resources Act), shall still not require a determination of suitability. However, if a substantial change is made to such a facility, the obligations to disclose under § 41 must be observed.

According to paragraph 9, existing rails in handling facilities which are laid in the ballast bed, for example, do not need to be retrofitted to become impermeable to liquids. In principle, this already follows from paragraphs 3 and 5, but is laid down again here because of the importance for the sector.

Paragraph 10 results in a special transitional provision for biogas facilities. The standard that was required in the individual Federal States in recent years in relation to these plants varies greatly. In a number of facilities, in the event of operational malfunctions, the inadequate safety technology results in fermentation substrates or residues escaping and in water pollution, leading to fish dying as a result. Reports of this kind appear almost weekly. In order to contain this acute risk to water in future, paragraph 10 requires that existing biogas facilities are equipped with a surrounding wall within 5 years of the ordinance entering into force, provided there is the space to do this. By means of this measure, the operational malfunction itself cannot be prevented, but at least the release into the environment of the substances that are generally hazardous to water, and the resultant fish deaths, can be prevented. Further measures shall only be carried out subsequently on the instruction of the local authority (sentence 3).

Paragraph 11 contains a transitional provision concerning the minimum storage capacity for fermentation residues.

Re § 70 (Existing facilities that are not subject to recurrent inspections)
§ 70 regulates the adaptation of the existing facilities which, following the entry into force of the ordinance, will not have to undergo a scheduled inspection.

According to paragraph 1, where they do not comply with the technical provisions of this ordinance, the existing facilities that are not subject to recurrent inspections will only need to be retrofitted if this is ordered by the competent authority. The responsibility of an operator to operate the facility in accordance with regulations is not affected by this.

Paragraph 2 stipulates that § 69(5), (7) and (8) shall also apply to the facilities not subject to inspection. For these facilities too, the order may not result in a decommissioning or removal of the facility (cf. § 69(5)), while the requirements laid down in the ordinance must be observed in the event of an alteration to the key structural parts or main safety devices (cf. § 69(7)).

Re § 71 (Test intervals for existing facilities)
Paragraph 1 sentence 1 stipulates that the period to be observed in the case of recurrent inspections of existing facilities shall start with the most recent inspection under Federal State regulations. Since, in several Federal States, certain inspections could also be carried out by specialist companies, the inspections performed by specialist companies in those Federal States shall be regarded as equivalent to those carried out by experts (sentence 2).

Paragraph 2 defines when facilities that did not need to be inspected hitherto will now be subject to inspection. A staggering of the test intervals is envisaged for facilities in this regard so as to avoid a situation whereby all existing facilities which are covered by the inspection obligation for the first time have to be tested simultaneously. In order to be able to carry out this large number of inspections within a short timeframe, both the expert organisations and the authorities would need to have the corresponding capacity available. The intervals between inspections are staggered according to the age of the facilities, since it is presumed that older facilities are more likely to be faulty.

Re § 72 (Installation of light fluid separators)
§ 72 makes provision for a special regulation for light fluid separators which are installed in fuel filling facilities, here, petrol stations in particular. Due to European legal requirements, an

increasing proportion of ethanol is mixed in with fuels. Based on current knowledge, it is not possible to make a definitive statement on whether this admixture may not impair the functionality of the light fluid separator and the tolerance of the material. This state of affairs is acceptable for a limited period, according to the initial technical assessments. In order to facilitate the studies that are required to this end, as well as any resulting adaptation of the light fluid separators as necessary, installation is still possible up to 31 December 2015 without the proof provided for in § 72.

Re § 73 (Transitional provisions for specialist companies, expert organisations and appointed individuals)
§ 73 regulates the transitional provisions for specialist companies, expert organisations and appointed individuals.

Status as a specialist company could hitherto be acquired from quality control and monitoring bodies recognised under building legislation, or on the basis of a monitoring agreement with a technical supervisory organisation, for a period of 2 years (see § 19l(2) sentence 1 point 2 of the previous version of the Water Resources Act and Federal State regulations). When this ordinance enters into force, only organisations approved under water regulations can undertake certification. Specialist companies that are entitled to display quality marks from quality control and monitoring bodies approved under building legislation are still considered to be specialist companies for 2 years under the new law, in accordance with paragraph 1 sentence 1, in order to make a smooth transition possible. A precondition is that the quality control and monitoring body continues to monitor compliance with criteria relating to specialist firms during this period. During this transitional period, the existing quality control and monitoring bodies have the opportunity to seek approval in accordance with § 58. No further transitional regulation is required.

In accordance with paragraph 2 sentence 1, existing approvals for expert organisations under Federal State law shall continue to be regarded as approvals under the new law. If this ordinance contains requirements that go beyond those under previous Federal State law, the expert organisations only have to fulfil these requirements as per sentence 2 after 6 months. An adequate transitional period should thereby be granted to them by means of the regulation in sentence 3.

Paragraph 3 makes it possible for individuals appointed by expert organisations and specialist companies to continue their activities, even if the requirements laid down in the ordinance in terms of technical expertise and experience are not satisfied. Up to now, it was possible for the competent authorities to agree to an appointment in individual cases even if certain requirements were not satisfied. This generally happened in view of the particular experience of these individuals. These individuals are not to be excluded from their field of activity, meaning that a special regulation is necessary for them.

Re § 74 (Entry into force, abrogation)
§ 74 regulates the entry into force of the ordinance and the simultaneous abrogation of the Ordinance on facilities for handling substances that are hazardous to water of 31 March 2010 (Federal Law Gazette I p. 377). So as not confer any disadvantage on the quality control and monitoring bodies which only have to be approved before they can certify specialist companies, in the first instance, only the regulations governing the approval of quality control and monitoring bodies shall enter into force on the day following promulgation. 4 months later – during this period, the approvals under § 58(6) are to be pronounced – the entire ordinance shall then enter into force. As a result of the delayed entry into force, operators, authorities and expert organisations also have sufficient time to gear themselves up for the provisions of the new ordinance.

It is envisaged repealing at the same time the General administrative provision amending the administrative provision concerning substances that are hazardous to water of 27 July 2005

(Federal Gazette No. 142a of 30 July 2005) so as not to allow any legal uncertainty to develop. This is, however, reserved for a separate process.

Re Appendix 1 (Classification of substances and mixtures as non-hazardous to water and into water hazard classes (WHC); determination of floating liquid substances as being generally hazardous to water)

Appendix 1 instructs the operator obligated to effect classification in accordance with Chapter 2 on how to assess his substances on the basis of the data to be ascertained within the framework of European substance and chemicals legislation and on how to assign them to one of three water hazard classes or classify them as non-hazardous to water. The collection of this data are specified by European chemicals legislation. As regards classification, evaluation points which have been stipulated in keeping with their relevance in terms of protection for bodies of water are assigned to the risk phrases or hazard statements ascertained from this data. The respective water hazard class is deduced from the total score established in this way.

The water hazard classes ascertained by self-classification form the basis for the final classification of substances by the Federal Environment Agency. The water hazard classes are an important characteristic for determining the technical and organisational requirements applicable to a facility to be operated.

Re point 1 (Basic principles)
Point 1 contains the definition of toxic characteristics and effects on the environment borrowed from European hazardous substances legislation (point 1.1), carcinogenic substances (point 1.2), floating liquid substances (point 1.3) and the multiplication factor for high aquatic toxicity (point 1.4). The earlier explanations are designed to make the text of the appendices easier to understand and to summarise these explanations in one place.

Re point 2 (Classification of substances and mixtures as non-hazardous to water)
In points 2.1 and 2.2, the criteria governing classification as non-hazardous to water are determined in greater detail. The criteria correspond to those of the General administrative provision concerning substances that are hazardous to water of 17 May 1999. On the basis of classification as non-hazardous to water, the facility-specific provisions of the ordinance and also the relevant stipulations of the Water Resources Act (§§ 62 and 63) do not apply to the facilities handling the corresponding substances and mixtures. In this case, only the general requirements of the Water Resources Act concerned with protecting bodies of water against adverse changes in water quality shall apply (see in particular § 32(2), § 45(2) and § 48(2) of the Water Resources Act).

Re point 2.1 (Substances)
Under point 2.1, the preconditions for classification of substances as being non-hazardous to water are determined. In order to classify a substance as non-hazardous to water, in addition to the exclusion of classifications under hazardous substances legislation as per point 4, further conditions must be satisfied with regard to water solubility, ecotoxicity in the context of solubility, biodegradability and bioaccumulation potential, which are derived specifically from point 2.1. Only if these criteria are satisfied is it possible to rule out the substance as being the cause of adverse changes to the quality of the water.

Re point 2.2 (Mixtures)
Under point 2.2, the preconditions regarding classification of mixtures as non-hazardous to water are determined. The preconditions are principally derived from the material components of the mixtures and the water hazard classes of the substances established in accordance with point 4. The criteria themselves correspond to those of the General administrative provision concerning substances that are hazardous to water of 17 May 1999.

Re point 3 (Determination of floating liquid substances and mixtures as being generally hazardous to water)
Point 3.1 stipulates, in relation to floating liquid substances, that they shall nevertheless be

regarded as being generally hazardous to water even if they satisfy all the criteria for substances which are non-hazardous to water as mentioned under point 2.1. As a result of floating on the surface of bodies of water, they can harm water organisms, insects and birds, for example, by suppressing their oxygen intake or mobility. They are, however, not assigned to a water hazard class, but are classified as being generally hazardous to water (§ 3(2) sentence 1 point 7). According to § 13(1), the requirements under Chapter 3 shall only apply to these substances and floating mixtures as per point 3.3 if it cannot be excluded that they will reach a body of water situated above ground. Point 3.2 supplements the obligation incumbent upon the Federal Environment Agency to publish the list of floating liquid substances so that legal certainty is established for operators. Point 3.3 contains a provision for mixtures which consist of floating liquid substances according to point 3.1 and substances that are non-hazardous to water. If this mixture continues to float, it shall be regarded as being generally hazardous to water.

Re point 4 (Classification of substances into water hazard classes)
Point 4 is the core provision for the criteria relating to classification of substances into the three water hazard classes. The results of the classification as per point 4 also constitute the principal basis for the classification of mixtures pursuant to point 5.

Point 4.1 essentially describes the approach in establishing the water hazard classes. Risk phrases or hazard statements, to which evaluation points are then assigned, are derived from scientific test results in accordance with Regulation (EC) No. 440/2008. Precautionary points are assigned in the event of data gaps which appear. The water hazard class is determined from the sum of the evaluation and precautionary points.

The tables under point 4.2 list all the risk phrases and hazard statements together with their evaluation points. Only risk phrases and hazard statements which depict the substance characteristics which, in connection with water or bodies of water, constitute a hazard for people and aquatic fauna and flora, were taken into consideration. In accordance with Regulation (EC) No. 1272/2008 (the CLP [classification, labelling and packaging] Regulation), the hazard statements are designed to supersede the risk phrases in full.

Point 4.3 determines how the absence of the evaluation of certain toxic characteristics or other effects on the environment is to be taken into account when deriving the water hazard classes. Depending on the missing data, default values are assigned in order to be able to take adequate account of the "duty of care" principle.

Point 4.4 stipulates the final mathematical analysis of the evaluation results to be carried out and the assignment to one of the three possible water hazard classes.

Re point 5 (Classification of mixtures into water hazard classes)
The risk posed to water by mixtures shall preferably be ascertained on the basis of the composition and the danger posed to the water by the individual substances contained in the mixture determined under point 4. This corresponds to the previous approach as per the General administrative provision concerning substances that are hazardous to water of 17 May 1999.

Point 5.1 governs in particular, in addition to the principles concerning the adoption of provisions under European law, the thresholds for consideration of substances contained in the mixture, depending on their hazard potential. If, in accordance with point 5.1 letter e), different water hazard classes are established from the sum of the evaluation and precautionary points, the water hazard class ascertained from the test data determined on the mixture is decisive, since any additive, synergistic or antagonistic interactions are depicted in a more realistic manner.
Point 5.2 specifies the general rule for determining the water hazard class of a mixture. This is ascertained depending on the content of the substances and their WHC.

Point 5.3 establishes the opportunity to determine the water hazard class directly in the case of mixtures as well, as is the case with substances on the basis of the toxicity data of the mixture. This is necessary, since the derivation under point 5.2 does not have to be appropriate in each and every case, e.g. if the composition of the mixture is not entirely known or because of interactions (additive, synergistic or antagonistic in nature) between the individual substances, the mathematically determined water hazard class may not correctly reflect the actual danger posed to the water by the mixture.

Re Appendix 2 (Documenting the self-classification of substances and mixtures)
Appendix 2 determines the form and content of the documentation forms for classifying substances and mixtures. The forms provide the operator with guidance in terms of the data to be entered and make it easier for the Federal Environment Agency or the competent authority to review the classification. The forms can be completed in writing or electronically; the ordinance indicates no preference.
The form and content of the documentation correspond to the documentation to be presented up to now in accordance with the General administrative provision concerning substances that are hazardous to water of 17 May 1999, taking into account experience associated with enforcement that has been acquired in the interim.

Point 1.2 determines the content and form of the documentation to be presented to the Federal Environment Agency regarding the classification of substances. The information which the operator must have at his disposal regarding self-classification in accordance with point 4 of Appendix 1 is required. The information follows from European hazardous substances legislation. Point 1.2.1 contains the data which must be specified, point 1.2.2 the data which ought to be specified, if the operator has it at his disposal. However, if a substance is classified as non-hazardous to water, the information must be presented pursuant to point 1.2.2 sentence 1 so as to exclude a risk to water with certainty.
Polymers are classified as substances. In order to define the clear identity of the classified polymers, further information is required under point 1.2.3 on the qualitative and quantitative composition, which must additionally be determined and specified.

Point 2 determines the form for mixtures which should also be completed if an operator utilises the opportunity in accordance with § 10(2) to classify a solid mixture in a water hazard class. Point 3 determines the form for solid mixtures which are classified as non-hazardous to water in accordance with § 10(1).

Re Appendices 3 and 4 (Instruction sheet on operating regulations and the code of conduct when operating fuel oil consumer installations and the Instruction sheet on operating regulations and the code of conduct when handling substances that are hazardous to water)
As has already been stated in relation to § 45(4), the instruction sheets as per Appendices 3 and 4 constitute a simplified and standardised form of operating instructions. The following information is to be derived from the instruction sheets: the facility in question, the substances that are hazardous to water which are handled therein, whether it involves a particular location, e.g. in a protected area, whether and when the facility requires an inspection by experts, whether the facility requires a specialist company and the party which must be alerted in the event of damage. Further information is not required for facilities in respect of which an instruction sheet may be used in accordance with § 45(4). The specified instruction sheets for fuel oil consumer installations (Appendix 3) or for other facilities (Appendix 4) represent a considerable simplification for operators since they specify the information to be included. In view of the nationwide providers of facilities and the nationwide activity of experts, it is also appropriate to provide an instruction sheet which is uniform across the whole country. Rationalisation shall thereby also be achieved for this category of persons.

Re Appendix 5 (Inspection times and intervals for facilities outside protected areas

and defined or provisionally secured flood plains)
Appendix 5 sets out the intervals at which an operator shall arrange for an inspection to be carried out by an external expert and which facilities outside protected areas and defined or provisionally secured flood plains shall be inspected. All underground and aboveground facilities are subject to inspection, graduated by the hazard level and the type of substance or facility. The inspection obligation exists prior to commissioning, following a significant alteration to the facility, at the time of decommissioning, and at recurring intervals in the case of certain facilities. The requirement for an expert inspection depends on the degree of risk to the water and largely corresponds to § 23(1) of the Model administrative instruction concerning substances that are hazardous to water. However, requirements relating to facilities handling solid substances that are hazardous to water (row 4), floating liquid substances (row 6) and biogas facilities (row 7) needed to be included again since these handle substances that are generally hazardous to water and cannot therefore be classified into hazard levels. The regulation relating to facilities for handling intermodal transport under row 5 is also supplemented since the facility operators, especially when handling containers, generally only succeed in providing the hazardous materials classification and not a classification into water hazard classes. Hence, the hazard levels cannot be derived from this. In order to make a precise classification into water hazard classes, the operators would need to partially open the containers, which, however, is often not possible for other reasons, or obtain more detailed data from the freight documents or via the consignor. These inspection obligations are regulated each time in a similar form to the facilities which can be assigned to a hazard level.
A new additional element is that facilities for drawing off and handling under hazard level B have to be inspected at regular intervals (see row 8). The inspection of facilities in hazard levels C and D every 5 years corresponds to that for other facilities for handling liquid or gaseous substances that are hazardous to water and is only shown separately in the table so that the requirements for individual facilities can be shown together. In the case of areas for drawing off, loss of function in the sealing surfaces may particularly arise due to dynamic traffic loads as well as through damage to the sealing surfaces caused directly by the traffic, falling objects or abrasive effects during operation. Handing facilities must be classified accordingly, with particular attention paid to a special risk potential in the case of facilities for loading and unloading of ships arising from the location directly adjacent to surface waters.

Footnote 1 serves to explain the letters used in the table.

Footnote 2 serves to explain the volume and mass data used in the table.

Footnote 3 extends the commissioning test of facilities for drawing off and handling to include a repeat examination of the areas used for drawing off or handling after 1 year. These areas may subside during the first months of operation in particular, which may lead to cracks or sealing material may become detached from the joints. After the expert inspection findings, a repeat examination such as this therefore constitutes an important element so as to be able to ensure that the areas satisfy the requirements laid down in the ordinance even after a certain operating time.

Footnote 4 determines the starting point of the recurrent inspection period. The decisive element as regards this inspection is the completion of the inspection prior to commissioning or following a significant alteration. This means that a delayed recurrent inspection shall not result in the date for the next recurrent inspection being based on the delayed inspection, but still as per schedule.

Footnote 5 stipulates when a deadline for a recurrent inspection is regarded as having been observed. During enforcement, discussions take place on a regular basis on whether inspections have to be carried out on a particular day. The footnote is designed to end this discussion since the deadline is still considered to have been met if the inspection at least takes place in the month in which the due date falls.

Footnote 6 makes reference to the fact that the table shows the total volume of the biogas facility.

Re Appendix 6 (Inspection times and intervals for facilities in protected areas and defined or provisionally secured flood plains)
Appendix 6 regulates the inspection obligations in relation to facilities in protected areas and defined or provisionally secured flood plains. These basically correspond to those of facilities outside these areas, as stipulated in greater detail in Appendix 5. Given the particular need to protect the areas mentioned, however, facilities largely situated below ground which contain liquid or gaseous substances that are hazardous to water must be inspected on a recurrent basis every 30 months, while facilities situated above ground containing hazard level B liquid or gaseous substances that are hazardous to water must be inspected on a recurrent basis every 5 years. This takes account of the particular need for protection in these areas. An increase in the intervals between inspections in the case of facilities for which no hazard class can be assigned was not undertaken, since a differentiation was deemed unnecessary from the viewpoint of implementation.

Re Appendix 7 (Requirements pertaining to liquid manure and slurry installations or silage seepage facilities)
Appendix 7 describes the requirements pertaining to liquid manure and slurry installations or silage seepage facilities. As regards these installations and facilities, the best possible protection for bodies of water from detrimental changes to their characteristics must be achieved in accordance with § 62(1) sentence 3 of the Water Resources Act.
Appendix 7 is particularly necessary so as to create a uniform, comprehensive regulation applicable under Federal law when transposing the Nitrates Directive which puts all agricultural undertakings on the same footing in terms of competition with regard to technical requirements pertaining to liquid manure and slurry installations or silage seepage facilities. This provided harmonisation of the law on facilities concerned with protecting bodies of water which has long since been requested, in particular by the businesses affected, after the law had developed differently in the Federal States on certain points.
If no provisions relating to the liquid manure and slurry installations or silage seepage facilities were to be laid down in the ordinance, the previous provisions under Federal State law, with their differing characteristics, would have to remain in force in this regard. In addition, considerable additional expense would be incurred as a result, both by the enforcement authorities and businesses, something which could be avoided by a comprehensive provision under Federal law.
Appendix 7 must be viewed in connection with the resolution of the *Bundesrat*, whereby the capacity of liquid manure and slurry installations or silage seepage facilities is regulated in the Fertiliser Ordinance in order to meet EU requirements in full. Consequently, the precondition was established to create a national regulation with the entry into force of the Fertiliser Ordinance. In this way, the competence of the water authorities with respect to installation engineering and orders concerning measures that are required, as well as the competence of the agricultural authorities regarding the minimum dimensions of the installations, is utilised.
By means of Appendix 7, a provision which is consistent within itself is established which ensures the best possible protection for bodies of water from detrimental changes to their characteristics as required in accordance with § 62(1) sentence 3 of the Water Resources Act.

Re point 1 (Definitions)
Point 1.1 contains a list of examples of liquid manure and slurry installations or silage seepage facilities. Only substances as per § 2 point 13 may be used in these installations and facilities.

Point 1.2 defines the term "collection facilities" and represents the outcome of the agreement

reached in the technical committee of the German Association for Water, Wastewater and Waste concerning the preparation of a technical rule for liquid manure and slurry installations or silage seepage facilities.

Re point 2 (General requirements)
Points 2.1 and 2.3 adopt the provisions under building law which also apply to other facilities for handling substances that are hazardous to water, namely, that facilities and parts thereof must be sufficiently resistant to the anticipated influences, as well as impermeable to liquids and functionally reliable, and that they must have proof of usability under building law which takes into account the requirements under water legislation. This provision concerning the need for proofs of usability from the building inspectorate shall result in a substantial relaxation in terms of enforcement since it will no longer have to be reviewed on a case-by-case basis whether all requirements are satisfied and, at the same time, the operators are safe in the knowledge that they may operate these facilities long-term without having to fear obligations imposed subsequently.

Point 2.2 defines, in deviation from the otherwise applicable basic requirements under § 17, the requirements which ensure the best possible protection for bodies of water in the case of liquid manure and slurry installations or silage seepage facilities and consequently follows the differing level of protection as required under § 62(1) sentence 3 of the Water Resources Act. In contrast to the requirements as per § 17, the need for retention systems shall lapse in relation to these installations and facilities. Since, when larger quantities of these substances are released, damage to the groundwater and the bodies of water above ground shall occur nevertheless, it is necessary that any release is detected in good time so that the farmer can take the necessary measures. Where retention is dispensed with, this requirement for rapid and reliable detectability of any leaking substances that are hazardous to water is indispensable since, according to an analysis conducted by the Federal Institute for Materials Research and Testing, 75 % of the total quantity of substances that are hazardous to water that are released in the event of accidents can be attributed to liquid manure and slurry installations or silage seepage facilities. The volume of substances released in this regard emanating from liquid manure and slurry installations or silage seepage facilities amounted to 4 607 m^3 in 2007 in any case, in which connection the number of accidents rose compared with previous years, although the quantity of substances released fell at the same time (study of the statistics " Unfälle mit wassergefährdenden Stoffen” [“Accidents involving substances that are hazardous to water"], compiled by the German Federal Statistical Office in 2007, compared with previous years, Federal Institute for Materials Research and Testing, October 2010). The built-in safety system otherwise required with other installations and facilities, and which also functions without human intervention, is therefore relinquished here in favour of a safety standard where the farmer is informed of substances being released in a timely manner and must then be in a position to take corrective action. Without his assistance, the water pollution cannot therefore be prevented. As regards liquid manure and slurry installations or silage seepage facilities, this provision specifically illustrates for the first time which differing requirements shall apply to them. From the point of view of water pollution control, dispensing with the retention system constitutes a substantial concession to the agricultural industry, but one which can be justified under the conditions depicted. Further cuts are incompatible with the best possible level of protection since it is beyond dispute that the escaping liquids shall impair water quality, culminating in fish dying, and the identification and initiation of corrective action in the event of damage or loss cannot be dispensed with.

Point 2.4 regulates the credentials of staff that erect, repair or decommission facilities. Cf. in this regard the explanatory statement relating to § 46. Special *de minimis* rules were envisaged in this regard in relation to the liquid manure and slurry installations or silage seepage facilities.

According to point 2.5, containers may not be constructed from wood since experience shows that they are not permanently leakproof and hence do not fulfil the basic requirements

geared to also offering the best possible protection for bodies of water.

Re point 3 (Facilities for storing liquid substances that are generally hazardous to water)
Point 3.1 specifies the basic requirement and stipulates in relation to storage facilities that they may be constructed with a single wall if they have leak detection capability. Pipelines may also be designed with a single wall, although they nevertheless must comply with the technical rules relating to such parts of the facility. A particular example of a technical rule in this regard is the Technical Rule concerning substances that are hazardous to water in worksheet 792 published by the German Association for Water, Wastewater and Waste, the draft of which shall be published shortly after the entry into force of the ordinance.

According to point 3.2, collection and storage facilities must be factored into the leak detection system as per point 3.1. In the case of collection and storage facilities beneath stables (slurry pits), in accordance with sentence 2, the requirement for a leak detection system can be dispensed with since this will be very expensive to install and, ultimately, is so prone to error that reliable and qualified statements regarding the imperviousness of the facility are not possible. Nevertheless, certain minimum requirements have to be fulfilled. To prevent these slurry pits from becoming actual storage facilities, the retention height is limited to the extent necessary for dung removal. In addition, pipelines and other installations with seals or joints must be inspected to ensure that they are in proper working order prior to commissioning, in particular that they have been laid in a leakproof manner. Sentence 1 shall apply to collection and storage facilities which are not arranged beneath stables.

Re point 4 (Facilities for storing solid manure and ensiled material)
Facilities for storing solid manure and plant and vegetable matter must be surrounded at the sides in accordance with point 4.1 so as to prevent precipitation from running off into the surrounding area. The area itself must be impermeable to liquid in accordance with point 2.3. Without these measures, these substances would enter the soil and groundwater and, with a prolonged exposure time, would result in a no longer insignificant level of ground and surface water pollution. In accordance with sentence 2, no requirements are imposed on areas of foil silos with round and square bales if silage is not removed from them. The quantities of silage seepage which usually accumulate in these bales are so small that they do not escape from the bales unless the latter are opened. In addition, these bales are often to be found on open farmland where the establishment of an area which is impermeable to liquid would not be appropriate.

Substances released during storage, in particular seepage, and the precipitation contaminated with them must be collected in their entirety and disposed of or recovered in accordance with regulations provided it cannot be utilised for fertilisation in accordance with fertiliser regulations, e.g. cannot be applied when the ground is devoid of vegetation or on snow. (point 4.2). Only in conjunction with this supplement is it ensured that these liquids that are generally hazardous to water are unable to find their way into the surroundings or a body of water.

Re point 5 (Transitional provision concerning requirements pertaining to capacity)
In future, the capacity of liquid manure and slurry installations or silage seepage facilities is to be regulated under fertiliser law. The provisions under Federal State law shall apply until the entry into force of the corresponding ordinances.

Re point 6 (Devices for drawing off)
Similar to the requirements under § 24 relating to other installations and facilities, point 6.1 defines the requirements relating to the filling and draining of installations. Point 6.2 contains the requirements pertaining to the complete collection, as well as recovery and disposal, of the precipitation which may be contaminated by the substances that are generally hazardous

to water, during filling and draining. Given the comparable hazard potential, it corresponds to the requirements imposed pertaining to the storage facilities as per point 4.2.

Re point 7 (Obligations incumbent upon the operator in terms of notification and monitoring)
Point 7.1 adopts the obligation to disclose, which applies to other facilities (§ 41(1)), in principle, to liquid manure and slurry installations or silage seepage facilities as well, but dispenses with it in the case of small facilities on account of the lower hazard potential. Those installations and facilities operated by part-time farmers are regarded as being small. According to information provided by the Bavarian farmers' association, part-time farmers are farmers who have up to 25 cattle and 15 calves. A requisite installation volume of a maximum of 500 m^3 per establishment is calculated from these figures.

Point 7.2 justifies the obligation for regular monitoring of liquid manure and slurry installations or silage seepage facilities, which shall also apply to other facilities.

Point 7.3 requires that the operator intervenes immediately in the event of damage or loss and initiates maintenance and repair measures. In contrast to the other installations and facilities, specialist companies are dispensed with here and, in turn, only qualified site personnel are required.

Point 7.4 requires testing to be carried out by experts at the time of commissioning, as well as by order of the local authority, in relation to liquid manure and slurry installations or silage seepage facilities that are subject to notification. Provision is only made for a recurrent inspection obligation, which is shortened in water protection areas, as with other facilities, in relation to ground basins on account of their design, which is particularly sensitive to external influences, and negative experiences with ground basins which have been in existence up to now. Since liquid manure, slurry and silage seepage often react in a chemically aggressive manner and, hence, attack the container materials and seals, as with other installations, it cannot be ruled out that defects and leaks shall occur during their service lives. Testing by external experts is designed to ensure that defects arising as a consequence, and as a result of external influences, can be detected and rectified in a timely manner. In this regard, it must be possible for these inspections to take place during operation since the accumulation of the slurry cannot be interrupted and it is possible, at most, to prevent an influx for a brief period during inspection. In this respect, inspections by means of which a relatively prompt statement can be made regarding the condition are preferred.

Points 7.5 and 7.6 adopt the provisions relating to the inspection of facilities, the inspection report and the forwarding of the results of the inspection, which apply to other facilities, for liquid manure and slurry installations or silage seepage facilities as well (§ 48(2) and (3)).

Point 7.7 regulates the rectification of defects that have been identified and corresponds to the provisions for other installations and facilities in § 49.

Re point 8 (Existing facilities that are subject to inspection)
Point 8 contains the transitional provisions for liquid manure and slurry installations or silage seepage facilities, which largely correspond to those in § 69.

Point 8.1 corresponds to § 69(1). Since the liquid manure and slurry installations or silage seepage facilities were not subject to a determination of suitability and, therefore, no more than one building permit may be available for these installations and facilities, the reference in § 69(1) point 2 could not be transferred to the official approvals. In this respect, the sole reference point is Federal State law applicable prior to the entry into force of the ordinance.

Point 8.2 corresponds to § 69(2) and (3).

Point 8.3 contains a special provision for existing facilities where it is not possible, for technical reasons or for reasons of proportionality, to install a leak detection system retrospectively. In these cases, the best possible level of protection is also observed if proof of the imperviousness of the facility is furnished in another way. Examples of such measures include regular measurements of the stowage height, inspection shafts which reveal the floor/wall joint, measuring points in the groundwater located close to the surface or the application of coatings and damp-proof membranes. With regard to the fact that as a result of this, the rapid and reliable detectability of leaks is only guaranteed to a limited extent, it is necessary to make provision for additional recurrent testing by experts.

Point 8.4 adopts the provisions under § 69(5) to (7).

Point 8.5 specifies the deadlines according to which existing facilities have to be inspected for the first time. As a result of the staggered arrangement, a situation is achieved whereby the inspections are equalised and, in this way, operators who own several facilities that are subject to inspection avoid stress peaks in their dealings with experts organisations and local authorities. The deadlines are staggered according to the age of the facilities since it can be assumed, in principle, that defects requiring remediation have originated in old facilities as a result of prolonged chemical attack and other influences. The first deadline shall apply to the facilities operational for more than 40 years at the time this ordinance enters into force. The final deadline shall be chosen such that facilities in operation for more than 20 years must then be inspected.

Re point 9 (Requirements in special areas)
On account of the particular risk potential in the coverage area and the narrower protected zone of water protection areas, as well as in flood plains, the provisions applicable therein in accordance with § 50(1) and § 51(1) are also borrowed for liquid manure and slurry installations or silage seepage facilities in points 9.1 and 9.2. Under point 9.3, the competent authority is afforded the opportunity, as is the case with the water protection areas and flood plains, to issue exemptions under certain conditions. In accordance with point 9.4, more extensive provisions on the basis of Federal State ordinances in the case of liquid manure and slurry installations or silage seepage facilities shall not be affected.