

GERMAN
DWA Rules and Standards

Standard DWA-A 199-4E

**Service and Operating Instructions
for the Personnel of Wastewater Systems**

**Part 4: Operating Instructions for the Personnel
of Wastewater Treatment Plants**

August 2006



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The German Association for Water, Wastewater and Waste (DWA) is the spokesman in Germany for all universal questions on water and is involved intensely with the development of reliable and sustainable water management. As politically and economically independent organisation it operates specifically in the areas of water management, wastewater, waste and soil protection.

In Europe the DWA is the association in this field with the greatest number of members and, due to its specialist competence it holds a special position with regard to standardisation, professional training and information of the public. The ca. 14,000 members represent the experts and executive personnel from municipalities, universities, engineer offices, authorities and businesses.

The emphasis of its activities is on the elaboration and updating of a common set of technical rules and standards and with collaboration with the creation of technical standard specifications at the national and international levels. To this belong not only the technical-scientific subjects but also economical and legal demands of environmental protection and protection of bodies of waters.

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Foreword

As a result of the EC Directive 91/271/EEC and in accordance with § 18b [German] Water Resources Management Law (WHG), wastewater systems are to be so established and operated, that the generally recognised rules of technology and the requirements, in particular in accordance with § 7a WHG, are complied with. The German Federal States have laid down the requirements on correct operation of facilities in self-monitoring ordinances. Furthermore, the licences in accordance with § 4 WHG as a rule contain requirements for the correct facility management, in order to prevent negative effects for others.

Sewerage systems, including the stormwater treatment systems, wastewater pumping stations and wastewater treatment plants, are technical installations for the harmless discharge of wastewater and for the protection of bodies of water. In order to guarantee a correct function and a fault-free operation, it is necessary, that suitable personnel are trained and further-trained properly, possess a precise knowledge of the facility and the technical interrelationships and perform their duties with the greatest care. Furthermore, an economic and secure operation presumes a precise limitation of the areas of the tasks and responsibilities of the personnel.

Operators of wastewater systems therefore have to produce service and operating instructions matched to the respective conditions in order to satisfy these requirements. Service instructions for all types of wastewater systems have mainly similar regulation contents and can therefore be combined. Operating instructions, on the other hand, deal with the special regulations for the individual sub-areas of the sewerage system including stormwater treatment systems, pumping stations and wastewater treatment plants.

The operation of wastewater systems has, in past years, experienced comprehensive changes as a result of the increased legal requirements and technical development. With this Standard the previous regulations in the Standards ATV-A 124E "Service and Operating Instructions for Personnel of Sewage Treatment Plants", ATV-A 140E "Rules for the Operation of Sewers – Part 1: "The Sewer Network" and ATV-A 148E "Service and Operating Instructions for Personnel of Wastewater Pumping Stations, Wastewater Pressure Pipelines and Stormwater Tanks" have been updated and combined. The contents of Advisory Leaflet ATV-M 108 "Measures against Hazardous Substances in Wastewater Systems – Notes for Service Instruction" [Not available in English] and parts of Advisory Leaflet ATV-M 141E "Precautionary Measures for Cases of Emergency with Public Sewer Systems" have been incorporated into the Standard. With this, the integration into quality and environmental management systems and the increased significance of cost aspects have also been taken into account. With the appearance of the Standard Series DWA-A 199E as final print the above named standards/advisory leaflets will be withdrawn. ATV-M 141E is already no longer available.

The Standard is subdivided as follows:

- Part 1: Service Instructions for the Personnel of Wastewater Systems
- Part 2: Operating Instructions for the Personnel of Sewerage Systems and Stormwater Treatment Systems
- Part 3: Operating Instructions for the Personnel of Wastewater Pumping Installations
- Part 4: Operating Instructions for the Personnel of Wastewater Treatment Plants

The respective minimum contents of the service and operating instructions are listed in the individual parts of this Standard. For illustration they are supplemented by model texts. As a result of the in part very different local constraints the operators must clarify which components have to be adopted or, if required, modified. Depending on the scope and characteristics of the facility to be operated, in individual cases a combination of individual parts of the service and operating instructions can also be sensible. Equally, operating instructions for several similar facilities can be combined together.

Authors

The DWA Working Group KA-12.3 “Service and operating instructions for wastewater treatment plants“, in agreement with the DWA Specialist Committee ES-7 “Operation and maintenance“ has produced the present standard.

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User Notes

This Standard is the result of honorary, technical-scientific/economic collaboration which has been achieved in accordance with the principles applicable therefore (statutes, rules of procedure of the ATV-DVWK and the Standard ATV-DVWK-A 400). For this, according to precedents, there exists an actual presumption that it is textually and technically correct and also generally recognised.

The application of this Standard is open to everyone. However, an obligation for application can arise from legal or administrative regulations, a contract or other legal reason.

This Standard is an important, however, not the sole source of information for correct solutions. With its application no one avoids responsibility for his own action or for the correct application in specific cases; this applies in particular for the correct handling of the margins described in the Standard.

1 Scope

The operating instructions contain details for the implementation of the regular operation and for the mastering of specific operating conditions. They are directed from the operator towards the employees and, with the limitation of tasks and responsibilities, take into account the provisions of service instructions. With authorised third parties – for example operational managements – analogous provisions are to be made. Through the creation and employment of operating instructions a correct, secure and economic operation of all process stages and plant components is to be guaranteed.

Standard DWA-A 199-4E describes the minimum contents of operating instructions for the personnel of wastewater treatment plants which, independent of the respective organisational and corporate structure of the operator, are to be complied with. In addition, explanations and recommendations are incorporated. The operating instructions are to serve the operators of wastewater systems as model and guideline for the elaboration of own operating instructions. With the setting up of operating instructions, in addition to this Standard, there are, if necessary, existing Federal State provisions to take into account. So far as quality and environmental management or technical safety management systems exist, the operating instructions are an elementary component of this system.

The formal structure of operating instruction is left up to each operator. The minimum contents and recommendations in accordance with this Standard can therefore also be contained in other available instructions. What is essential is that the responsibilities and duties are clearly regulated with all instructions.

All structures, which serve the treatment of wastewater and the treatment of wastewater sludge, are covered by this Standard.

The elaboration of service and operating instructions is to take place together with the personnel concerned in order that the instructions are generally accepted and are used for daily operation. The operating instructions must be updated at regular intervals or with important amendments. Responsibilities for this must be clearly regulated, for example, through written specification of a responsible member of staff.

A model text (example) for operating instruction is included as an aid in the Annex to this Standard.