Determination of technical principles for the preparation of the proportionality review of long-term pump-and-treat measures

ERMITTLUNG FACHTECHNISCHER GRUNDLAGEN ZUR VORBEREITUNG DER VERHÄLTNISMÄßIGKEITSPRÜFUNG VON LANGLAUFENDEN PUMP-AND-TREAT-MAßNAHMEN

For economic and ecological reasons, regular examination of the efficiency of long-term remediation measures is advisable, taking into account the findings and experience acquired from the remediation progress to date. This best practice guide therefore deals with the examination of long-term pump-and-treat measures and long-term soil vapour extraction projects in preparation for the proportionality review by the authorities. It is primarily intended for the competent authorities, as well as experts, specialist consultancies and those responsible for the remediation, who have to assess long-term remediation measures. It describes the procedure for reviewing the technical and conceptual optimisation potential, provides help in classifying the remediation efficiency and recommendations on forecasting the risk development following possible shutdown of a remediation facility.

The best practice guide is structured as follows:

Chapters 1, 2, 3 and 4 explain the basic principles and scope of the guide. The procedural concept is described and the terms used are defined.

Chapter 5 is divided into seven work steps, which are necessary in order to review the optimisation potential of a remediation measure and to point out possible alternatives to the existing method.

Chapter 6 describes the data collection and statistical analysis of 137 cases to determine specific operating parameters. As it is not possible to derive generally valid limits or limit ranges for the efficiency assessment, the user of the guide is given the opportunity of classifying the values of their specific operating parameters on the basis of the analyses.
Chapter 7 deals with the forecasting of future risk development for the period after a remediation facility is shut down. Essentially, the examination of future effects on sensitive receptors and the interests of third parties, who may be affected by the shutdown of a remediation facility, is explained in greater detail.

The guide was drawn up as part of the EU LIFE+ project: "MAGPlan“ (Management plan to prevent threats from point sources on the good chemical status of groundwater in urban areas), which the state capital Stuttgart is working on together with the LUBW (State Environmental Agency of Baden Württemberg) as its associate partner from 2010 to 2014. The method developed is a standardised procedure for determining the technical principles for the preparation of the proportionality review and is to be updated.