

Abstract

Environmental pollution is a global and very serious problem. The Czech Republic was privatised after the year of 1989. State-owned industrial facilities were transferred to private ownership and so was the obligation to remove environmental burdens. In the past, little emphasis was placed on sustainability and protection of the environmental, giving rise to the concept of old environmental burdens. Remediation methods are capable of removing decades-old contamination and their development is constantly moving forward. This paper contains a selection of most commonly used remediation methods in the Czech Republic and a brief description of their principles and applications. Examples of operational or semi-operational applications of described remediation methods are given. Main attention is paid to innovative remediation methods, which were methodologically extracted from recordings of conferences Remediation Technologies, Innovative Remediation Technologies in Research and Practice and from the peer-reviewed journal Waste Forum. Innovative remediation methods are defined for the purposes of this paper as remediation methods that were developed after year 2000 and are not yet part of the mainstream commercial offerings of companies offering remediation work. This work describes the principles of selected innovative remediation methods and explains the subject of innovation of the specific method itself. The 12 innovative remediation methods found according to the methodology are presented. In the final chapter, the results and discussion summarise, critically evaluate and partly place these methods in a global context. The future of remediation technologies lies in finding a balance between efficiency and effectiveness, taking into account the costs and impact of the remediation intervention on the environment. It is desirable to develop further innovations to improve the effectiveness of existing remediation methods.