



Inventory of closed facilities for treatment of wastes from mining and other activities of mineral resource extraction

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Popis zaprtih objektov za ravnanje z odpadki iz rudarskih in drugih dejavnosti izkoriščanja mineralnih surovin

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Abstract

In accordance with Article 20 of Directive 2006/21/EC, Geological Survey of Slovenia prepared an inventory of closed waste deposits from mining and other extractive activities in Slovenia, which could have a negative impact on human health and the environment. The inventurisation was carried out in three phases. The first included preparation of a list, based on archival data, of closed underground, surface and coal mines, where waste deposits may endanger people and the environment due to their chemical and physical state, proximity to transportation routes and pollutant receptors. In the second phase, a list of 173 closed waste deposits of metal and coal mines was made, based on archival and field data, of which 78 were further treated in the third phase. In the third phase, chemical and mineralogical analyses of sediments of watercourses draining waste deposits and the stability assessment of waste deposits were performed. Based on risk assessment, 37 metal mine waste deposits were classified as critical to moderately critical and 2 coal mine waste deposits as moderately critical.

Key words: closed mine waste deposits, chemical analyses, stability, classification, risk assessment, environmental impact.

Povzetek

V skladu z 20. členom Direktive 2006/21/ES smo na Geološkem zavodu Slovenije izdelali inventar zaprtih odlagališč odpadkov iz rudarskih in drugih ekstraktivnih dejavnosti v Sloveniji, ki lahko negativno vplivajo na zdravje ljudi in stanje okolja. Izdelava inventarja je potekala v treh fazah. V prvi je bil na podlagi arhivskih podatkov izdelan seznam zaprtih rudnikov, površinskih kopov in premogovnikov, katerih odlagališča odpadkov bi zaradi kemičnega in fizičnega stanja, bližine transportnih poti in prejemnikov onesnaževal lahko ogrozila okolje in ljudi. V drugi fazi je bil na osnovi arhivskih in terenskih podatkov izdelan seznam 173 zaprtih odlagališč kovinskih rudnikov in premogovnikov; 78 od teh se je uvrstilo v tretjo fazo. V tretji fazi so bile opravljene kemične in mineraloške analize sedimentov vodotokov, ki odvodnjavajo odlagališča ter ocenjena stabilnost odlagališč. Na podlagi ocene tveganja je bilo 37 odlagališč kovinskih rudnikov opredeljenih s kritičnim do zmerno kritičnim vplivom, 2 odlagališči premogovnikov pa zmerno kritičnim vplivom.

Ključne besede: zaprta odlagališča rudarskih odpadkov, kemične analize, stabilnost, klasifikacija, ocena tveganja, vplivi na okolje.