

"Gheorghe Asachi" Technical University of Iasi, Romania



WATER QUALITY ANALYSIS FROM A MINING AREA. CASE STUDY: TARGU OCNA SALT MINE, ROMANIA

Alina Cochiorca¹, Adriano Fiorucci², Valentin Nedeff^{1,3*}, Narcis Barsan¹, Emilian Florin Mosnegutu¹, Dana Chiţimus¹, Mirela Panainte-Lehadus^{1*}

¹Vasile Alecsandri University of Bacau, Faculty of Engineering, 157 Calea Marasesti, 600115 Bacau, Romania ²DIATI, Polytechnic of Turin, Corso Duca degli Abruzzi, 24,10129 Torino, Italy ³Gheorghe Ionescu Sisesti, Academy of Agricultural and Forestry Sciences Bucharest, 61 Marasti, 011464, Bucharest, Romania

Abstract

To resolve the water source quality problems for different water demand it is very important to establish in each zone the water sources (surface or/and groundwater) and the main source of pollution for these. By a continuous or periodical water quality monitoring, in industrial zone, can be avoided the major risks of environmental pollution and human health negative implications. The salt load and the specific salt composition, differing from natural rivers from a common area compared with surface water from a salt mining zone. The present paper aims to establish some surface and groundwater quality analysis parameters from an industrial area. The present study is focused on the Targu Ocna mining area, with salt extraction activities and the quality analyzed rivers were Trotus, Slanic, Valcica, two drilling and a fountain. In this sense, were measured 12 water quality parameters, some values were obtained in situ with portable equipment's and other parameters were determined in the research laboratory.

Key words: groundwater, mining zone, rivers, water quality

Received: June, 2020; Revised final: December, 2020; Accepted: January, 2021; Published in final edited form: March, 2021

^{*}Author to whom all correspondence should be addressed: e-mail: vnedeff@ub.ro; mirelap@ub.ro