



PRELIMINARY INVESTIGATION AND RISK ASSESSMENT OF CONTAMINATION ON AN INDUSTRIAL SITE IN MARAMURES COUNTY

Ileana-Codruța Stezar^{1*}, Oana-Cristina Modoi¹, Zoltán Török¹, Nicolae Ajtai¹,
Augusta-Diana Crișan¹, Gheorghe-Viorel Coșara², Francisc Senzaconi¹, Alexandru Ozunu¹

¹Babeș Bolyai University, Cluj- Napoca, Faculty of Environmental Sciences and Engineering, Research Centre for Disaster
Management, 30 Fântânele Street, 400294 Cluj-Napoca, Romania

²S.C. OCON ECORISC S.R.L., 101 Dr. Ioan Rațiu, Turda, Cluj County, Romania

Abstract

Sites contaminated with hazardous material are a topical and urgent problem all over the world. Risk based remediation is used to develop maximum safety cost effective sanitation methods for future land users. The analyzed site lays within the North Western region of Romania, in the vicinity of Baia Mare, the main city in Maramures County. Taking into account the former activities conducted on the site, as well as future demolishing works and future developments, analyses to certain contaminants in soil, groundwater and building materials were performed. The level of pollution based on Romanian regulations was established. The paper further presents a human health risk assessment and determines the contaminated area on the site. Two most suitable risk-based remediation actions for the site were proposed.

Key words: contamination, industrial site, pollution remediation, risk assessment

Received: November, 2010; *Revised final:* January, 2011; *Accepted:* January, 2011

* Author to whom all correspondence should be addressed: e-mail: stezar_codruta@yahoo.com