
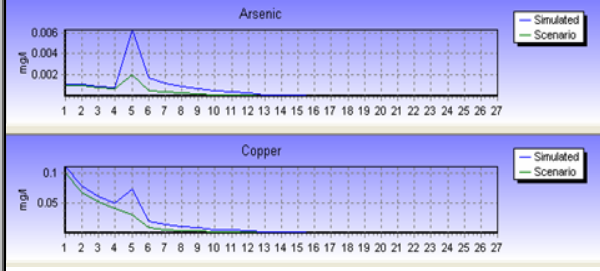


Water Resource Associates

A network of consultants in hydraulics, hydrology, groundwater & environmental issues

Project title: Modelling Acid Rock Drainage from Mines in Romania

Summary: Development and application of a new model INCA-Mine to the Aries-Mures River system.

Client: Romanian Government	Financed by: Romania
Period of assignment: 2006	Location: Transylvania
Project Value: £25,000	WRA services: £25,000
 <p>☞ Metal rich waters of the Abrud River from the Mine draining into the Upper Aries River</p>	<p>Background</p> <p>Mining in the Transylvania region of Romania is a major issue now the Romania has joined the EU. Old mines going back to pre-Roman times have been polluting the rivers for over 2000years. Moreover there is a desire to reopen and develop the mines to both clean up the polluting discharge s and extract metals to boost the local economy. WRA has undertaken an extensive study of the Aries and Mures River systems in Transylvania in Northern Romania where an old mine is having a major impact of river water quality.. A new version of INCA has been created to simulated the fate and distribution of mine waste from the old mines and the model has been applied to the Aries- Mures River System The INCA-Mine model has been used to assess the environmental improvements expected from a clean up operation at the mine as well as the environmental impacts of reopening this old mine. (Figures show the metal rich waters of the Abrud River draining into the Aries River and the likely improvements in arsenic and copper from the mine cleanup operation.</p>
 <p>☞ Likely improvements in arsenic and copper from the mine cleanup operation- Green line shows effects of clean up.</p>	<p>Scope of work by Water Resource Associates Ltd</p> <p>Development of INCA-Mine model to simulate the fate and distribution of 8 metals derived from Mine Acid Rock Drainage. The model has been applied to assess the clean up of mines in Romania and also the likely impacts of future mine operations.</p>
<p>Results</p> <p>Report to the Romanian Government. A Water Quality Modelling Study of Mining on the Abrud, Aries and Mures River Systems: Assessing Restoration Strategies and the Impacts of Potential Pollution Events.</p>	

Project Number 000174

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