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| **Program** | **Program NUCLEU PN 06-12.03.03** |
| **Project title** (ENG): | **Advanced Removal of Arsenic Compounds from Aqueous Systems with Complex Pollution Applying Combined Method of Oxidation/Precipitation/Flotation - Tool for Implementation of the Programs for European Legislation Fulfilment in the Frame of Environmental Discharging of Hazardous Substances** |
| **Project title** (RO): | **Indepartarea avansata a compusilor cu arsen din sisteme apoase cu impurificare complexa prin procedeu combinat oxidare/precipitare/flotatie-instrument de realizare a programelor de aliniere la legislatia europeana cu privire la evacuarea in mediu a substantelor periculoase** |
| **Duration** | 2006-2008 |
| **Team Leader** | Mihai STEFANESCU |
| **Summary**<br>(short description) ENG | The experiments of oxidation - precipitation/adsorption - flotation/settling led to the followings results:<br>– the completion of data base in the field;<br>– the establishment of the effluents pollution matrix (mine waters, wastewater from pesticides fabrication) and drinking water sources;<br>– the establishment of treatment optimal parameters taking into account pollution context;<br>– the establishment of optimal treatment flow scheme for wastewater with arsenic compounds content to be within admitted limits;<br>– the improvement of existent drinking water/wastewater treatment plants.<br>It was elaborated an advanced physical - chemical treatment technology for industrial wastewater (mine water) with arsenic content in order to have final effluents in the frame of discharging admitted limits to natural receivers. |
| **Summary**<br>(short description) RO | Experimentele de oxidare - precipitare/adsorbtie - flotatie/decantare efectuate au condus la obtinerea urmatoarelor rezultate:<br>– completarea bazei de date in domeniu;<br>– stabilirea matricei de impurificare a efluentilor uzati (ape de mina, efluenti din industria de sinteza pesticide) si a surselor de apa potabila;<br>– stabilirea parametrilor optimi de epurare/tratare functie de contextul de impurificare;<br>– stabilirea fluxului optim de epurare a apelor reziduale impurificate cu compusi ai arsenului in vederea incadrarii in limitele admise;<br>– imbunatatirea eficientei statiilor de potabilizare/epurare existente.<br>A fost elaborata o tehnologie de epurare fizico-chimica avansata a apelor reziduale industriale (ape de mina) cu continut de arsen pentru incadrarea efluentilor finali in limitele admise la evacuare in emisari naturali (NTPA 001/2005) |
| **Dissemination of results** | |
| Conferences (platform, poster, abstract / full-paper) | **Stefanescu M**, Constantin L, Dinu L, Moise A, Removal of arsenic based compounds from aqueous systems using different physical-chemical methods, *ECOIND Symposium "The Environment and Industry"*, **2007**, Bucharest |
| | **Stefanescu** M, Cosma C, Nitoi I, Advanced remove of arsenic compounds from drinking water supplies based on membrane processes, *COST ACTION 637*, **2008**, Brusseles |