USGS

WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2004ME29B

Title: Metal mobilization from municipal biosolids stockpiles: The role of dissolved organic matter.

Project Type: Research

Focus Categories: Solute Transport, Toxic Substances, Water Quality

Keywords: Contaminant Transport, Sludge, Toxic Substances¸ Water Quality

Start Date: 04/01/2004

End Date: 08/31/2005

Federal Funds: $3,000

Non-Federal Matching Funds: $30,918

Congressional District: 2

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Abstract

This project involves field observations and laboratory experiments to assess the mobilization potential of trace metals from municipal biosolids stockpiles. We propose to study the concentration, speciation, and lability of trace metals released from the biosolids both in surface runoff and in groundwater leachate. Field observations include monitoring of metals concentrations in the solid-phase, and in the biosolids dissolved organic matter (DOM), at our field site in Maine. Laboratory experiments will be conducted using the biosolids DOM collected from the field to determine the stability and the electrochemical lability of trace metal-DOM complexes. Both field and laboratory studies will be done using the runoff and the leachate as a function of the age of the biosolids stockpile.