

ET-017
**Selective Removal of Phosphate, Perchlorate and arsenic with
Hybrid Ion Exchanger (HIX)**

Arup K. SenGupta

Professor, Department of Civil and Environmental Engineering, Lehigh University

John E. Greenleaf and Suna Cinar

Graduate Students, Department of Civil and Environmental Engineering,
Lehigh University

Seth Donrovich

Undergraduate Student, Department of Civil and Environmental Engineering,
Lehigh University

Industry Participants

Purolite Co., US Filter

Abstract

During the last three years we have developed a hybrid ion exchanger (HIX) which is very arsenic selective and durable. The material is undergoing field trials in several locations.

Recently we encountered that the same HIX material is quite effective in removing both phosphate and perchlorate. While many groundwater sources in California and other western states have been contaminated with perchlorate, phosphate removal has attained high priority in the state of Florida to control eutrophication. The objective of the proposed project is to tailor the hybrid ion exchanger and validate its phosphate and perchlorate removal efficiency.