



## WATER RESOURCES RESEARCH GRANT PROPOSAL

**Project ID:** 2002MD2B

**Title:** Advancement of Electron Beam Methodologies for Remediation of PCB Contaminants in Chesapeake Bay Sediments

**Project Type:** Research

**Focus Categories:** Sediments, Toxic Substances, Water Quality

**Keywords:** Remediation, PCBs, Electron Beam Irradiation

**Start Date:** 03/01/2002

**End Date:** 02/28/2003

**Federal Funds:** \$20,000

**Non-Federal Matching Funds:** \$40,826

**Congressional District:** 5th Congressional District Maryland

**Principal Investigator:**

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**Abstract**

The goal of this research is to facilitate the application of the electron beam radiation to the remediation of PCB contaminants in Chesapeake Bay Sediments sites. More importantly, there are many advantages in the use of ionizing radiation which have the potential to make it preferable to other processes for remediation of PCB contamination such as incineration. PCBs are typically found with other chlorinated organic species and ionizing radiation has been shown to effectively degrade a wide range of halogenated compounds. Gaseous and particulate effluents are minimized and the process is inherently selective to the target compounds. Preliminary studies have indicated that the technology may be economically competitive with other treatment methods and prior work has demonstrated that nothing becomes radioactive (i.e. the product, the materials handling equipment, the radiation vault, etc.) during treatment.