Role of Resuspended Sediments in the Transport and Bioaccumulation of Toxic Organic Contaminants in the Nearshore Marine Environment

Experiments designed to evaluate the transport and fate of organic contaminants have been completed. The extensive data generated during the laboratory studies will require additional time to evaluate and the result of this evaluation will be provided in the final report which will be completed by October 10, 1994.
ANNUAL TECHNICAL REPORT
OF
THE UNIVERSITY OF RHODE ISLAND
TO
THE AIR FORCE OFFICE OF SCIENTIFIC RESEARCH
FY 1992
PURSUANT TO AFOSR AWARD NO. AFOSR-91-0304

Project Title:

THE ROLE OF RESUSPENDED SEDIMENTS IN THE TRANSPORT AND
BIOACCUMULATION OF TOXIC ORGANIC CONTAMINANTS IN THE
NEARSHORE MARINE ENVIRONMENT

Principal Investigators:

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(a) Statement of Work

The proposed research would provide process data (rates, directions, etc.) to determine the role that resuspension has: as a source of toxic organic pollutants to the environment (downstream and overlying water column); on the phases that HOCs are associated with during resuspension episodes; and in the bioavailability of contaminants by organisms during such episodes.

(b) Status of research effort.

The entrainment experiments have been running about 6 months behind due to problems associated with the adaptation of the PES to trace analytical work. Once adapted experiments ran as planned.

(c) List of written publications.

We plan to submit at least one manuscript to either The Science of the Total Environment or another environmental journal.

(d) List of professional personnel associated with the research effort.

Dr. Wayne Davis, biochemist at EPA's Environmental Research Laboratory - Narragansett
Mr. Darryl Keith, geologist at EPA's Environmental Research Laboratory - Narragansett
(e) **Papers Presented**

Seminar to the Department of Marine Sciences at the University of Connecticut entitled “Estuaries as Geochemical Laboratories: Sources, Transformations, and Fates of Hydrophobic Organic Contaminants in Narragansett Bay.”

(f) **New discoveries**

Except for research data and insight, no inventions or patents were made.

(g) **Other**

Work is progressing well. Plans for bioaccumulation studies had been going well with other investigators at the EPA; however, due to the loss of anticipated third year funds, we plan to undertake abbreviated studies related to bioavailability.