Guest Editorial

In order to develop rational pollution abatement strategies we must first determine the adverse effects on the environments as the result of the activities of man, identify the chemicals that lead to those effects and their origin, and quantify how these chemicals travel through the environment and reach the affected receptors (e.g., man, animals, vegetation, etc.). Once the above questions are answered then we will be in a position to understand which environmental control strategies will be most effective. The above approach to environmental protection can only be achieved by an integrated approach which recognizes that the environment is a system of interacting compartments. Clearly, this requires an understanding of the sources of pollutants, their pathways to the receptors of concern, and movement across environmental phase boundaries (i.e., intermedia transport). Although the field of chemical transport in the environment has received much attention in the environmental literature, there are still many unresolved problem areas in intermedia and multimedia transport. Obviously it is beyond the scope of a single issue of the *Journal of Hazardous Materials* to deal with the myriad of environmental intermedia transport problems. Nonetheless, it is hoped that this special issue of the Journal can serve as an example of an integrated treatment of environmental intermedia processes.

In this special issue of the Journal a selected number of contributions are presented with a focus on the movement of chemicals across environmental phase boundaries and their partitioning in the multimedia environment. The first four papers deal with chemical transport in the soil environment and volatilization of chemicals from the soil to the atmosphere. These papers are followed by two contributions that focus on the movement of chemicals between the water and atmospheric compartments. The remainder of the papers deal with the global distribution of trace gases and the multimedia partitioning of volatile and particle-bound organics in the multimedia environment.

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