

tion. This project is investigating altering, *in situ*, either the surface chemistry of the soil particle or the nature of the sorbed organic compounds, such that the organic compounds will be desorbed and then be ready for transport and treatment.

Two approaches were investigated so far, to alter the soil-sorbate bond; (1) the addition of H_2O_2 to make the sorbate more oxygenated (more polar), (2) the addition of NaOH to alter the surface properties of the soil at high pH. Soil specimens contaminated in the laboratory with phenol were placed in the flexible-wall permeameter apparatus. In duplicate, contaminated specimens were permeated with 120 mg/L solution of H_2O_2 . A 77% recovery of the contaminant was measured, whereas in duplicate contaminated specimens permeated with NaOH solution at pH 10 a 87% recovery was measured. To allow a comparison of the treatment processes to simple flushing, triplicate contaminated specimens were permeated with deionized water and a 61% recovery of the contaminant was measured.

A hazardous substance project management system

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Abstract

Disposal of the ever-increasing amounts of hazardous substances is a critical concern in our society. Vast amounts of resources are necessary to conduct research into the most efficient and effective means to treat these wastes. Officials of the Federal and State Governments and in Industry are involved in the planning and allocation of financial resources to combat this problem. Im-

portant elements in the management and direction of Hazardous Substance Projects are computer hardware and software.

The Director of The Gulf Coast Hazardous Substance Research Center (GCHSRC) and his staff are concerned with coordinating research activities between participating Universities, Federal and State Government Officials, Industrial researchers and a variety of other personnel in this effort. In this capacity, they are involved in the review, coordination and acceptance of many research proposals. They must track the proposals and their associated budget requests from the time they are submitted until their approval or rejection. Once a project is approved and funded, it must be tracked, monitored and modified until the research is complete. Some projects are funded jointly from Federal and State appropriations. Others are funded entirely by State, Federal or Industrial resources.

In order to efficiently and effectively manage this effort a Project Management Information System (PMIS) was developed. The system was developed to minimize costs, reduce errors, improve status reporting and permit "what-if" planning for budgets and is described in this paper. The system is currently being enhanced to run on a Local Area Network (LAN) so that the Director, the Assistants and Staff can simultaneously use the system to generate reports, update the database and query the status of various research projects. Such a local area network provides for resource sharing, system evolution, information reliability and availability, improved system response and flexibility of equipment location. The utility, performance and problems associated with PMIS and the LAN are discussed in this paper.

Hydrogen peroxide/ultraviolet irradiation process for treatment of leachates and contaminated groundwater

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Abstract

Groundwater contamination by synthetic organic compounds has become a major quality concern nationwide, and will most likely continue to be so for some time in the future.