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.

Hydrogen peroxide/visible-ultraviolet irradiation for oxidation of organic environmental contaminants is a promising treatment technology. This research uses a continuous flow tubular reactor to model the rate of disappearance of organic compounds (benzene, trichloroethylene, 1,4-dichlorobenzene, 1,1-dichloroethane, 1,1,1-trichloroethane, tetrachloroethylene, and carbon tetrachloride) at both leachate and contaminated groundwater concentration levels. The effects of process parameters includedi in the study are space velocity (contact time), oxidant to reactant ratio, and light intensity.

Hydrometallurgical treatment of hazardous waste for simultaneous detoxification and metal recovery

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Abstract

Many industrial processes generate hazardous solid wastes containing heavy metals such as lead and cadmium. Fly-ash from municipal solid waste (MSW) incinerators and waste molding sand from brass foundries are two examples. This material is currently disposed of in hazardous waste landfills. Investigations presented in this paper address a potential hydrometallurgical process for (1) chemical dissolution (leaching) of the metal values from the hazardous waste, and (2) recovery of the dissolved metals from the aqueous leaching solution which can then be recycled. The process is flexible and can be applied to various types of solid waste. Work during the previous year has been concentrated on MSW fly-ash.

The leaching of metal values from MSW fly-ash has been compared for various lixiviants, including HCl, H_2SO_4, acetic acid, NaCl and HCl + NaCl. The maximum extractions observed for Pb, Cd and Zn were 89%, 98% and 74%, respectively in 1 *M* HCl. Chemical dissolution of Pb, Cd and Zn can be accom-