September 12, 2000

Recent Publications

Julie Roth, Executive Director
DSCSOC

Dear Julie:

I wish to bring to your attention that the book, Remediation Engineering of Contaminated Soils, has just been published by Marcel Decker, Inc. This book contains a chapter by Dr. Jones-Lee and myself entitled, "Evaluation of the Adequacy of Hazardous Chemical Site Remediation by Landfilling." This chapter discusses problems with trying to develop onsite landfills, as well as landfill-covered waste areas, as part of Superfund site remediation, that will be protective of groundwater resources, public health and the environment for as long as the waste residues in the landfill will be a threat. It has direct applicability to the approach used in managing UCD's three campus landfills at the LEHR site.

The chapter also includes discussions of such issues as the unreliability of the TCLP approach for waste classification and related topics. Copies of this chapter are available from my website, www.gfredlee.com. I can provide an electronic version to anyone interested.

I also wish to bring to your attention that, on September 15, I will be presenting a paper, "Improving Public Health and Environmental Protection in Superfund Site Investigation and Remediation," at the US EPA national Superfund site Technical Assistance Grant conference that is being held in Nashville, Tennessee. This presentation has evolved out of DSCSOC's experience over the past five years in LEHR site investigation and remediation approaches. I will be discussing a number of the problems, such as inadequate stormwater runoff monitoring, inadequate vadose zone modeling, inadequate definition of constituents of concern, failure to address translocation of hazardous chemicals, slow rate of investigation of the full extent of groundwater pollution by LEHR site wastes, etc. – i.e., the issues that I have been discussing year after year at the LEHR site town meetings. While I understand there will be no Proceedings of the US EPA conference, a copy of the slides that I will be using in that presentation is available upon request and will be posted on the DSCSOC website.

I also wish to bring to your attention a new paper that has just been published,

Nyer, Evan K., Kathy Thalman, Pedro Fierro and Olin Braids, "Just When You Thought You Were Safe," *Ground Water Monitoring and Remediation*, pp. 51-57, Summer (2000).

This paper discusses an issue that I have been concerned about for many years – namely, the limited number of constituents of concern considered in Superfund site investigations compared to the 75,000 chemicals that are used in U.S. commerce today. Nyer, *et al.*, review the "new" hazardous chemicals that are being found in groundwater that have been there for many years, but not recognized. These chemicals include MTBE (methyl tertiary-butyl ether); 1,4-dioxane; perchlorate and NDMA (n-nitrosodimethylamine). While the US EPA has not yet established MCLs for these chemicals, several states have established standards in the range of 2 to 35 μg/L – i.e., in the same range as chlorinated solvents. In addition, the publication,

Gintautas, *et al.*, "Phenoxyalkanoic Acid Herbicides in Municipal Landfill Leachates," *Environ. Sci. & Technol.* 26:517-521 (1992),

states,

> *"We conclude that the chlorinated 2-phenoxypropionic herbicides, particularly mecoprop, are ubiquitous in municipal landfill leachates from the United States. These compounds may have been undetected or unidentified in previous studies due to analytical limitations. Our studies suggest that the degradation of (chlorophenoxy)propionic acids in landfill leachates is sufficiently slow that transport into groundwater is possible."*

This is another of the situations where some of the 75,000 chemicals in use are not on the US EPA's "priority pollutant" list, but are common constituents in wastes, including residential yard wastes, and are a threat to public health and the environment.

Our previous papers on this topic include:

Lee, G. F. and Jones-Lee, A., "Evaluation of the Adequacy of Hazardous Chemical Site Remediation by Landfilling," In: Remediation Engineering of Contaminated Soils, Marcel Dekker, Inc., New York, pp. 193-215 (2000),

Lee, G. F. and Jones-Lee, A., "Does Meeting Cleanup Standards Mean Protection of Public Health and the Environment?," In: Superfund XV Conference Proceedings, Hazardous Materials Control Resources Institute, Rockville, MD, pp. 531-540 (1994),

Jones-Lee, A. and Lee, G. F., "Groundwater Pollution by Municipal Landfills: Leachate Composition, Detection and Water Quality Significance," Proc. Sardinia '93 IV International Landfill Symposium, Sardinia, Italy, pp. 1093-1103, October (1993).

As I have discussed, there could readily be a variety of hazardous or otherwise deleterious chemicals present in LEHR site soils, wastes and groundwaters that are not now "constituents of concern." As I have pointed out in our writings, it is inappropriate to assume that because a water that has been in contact with complex mixtures of wastes, meets existing MCLs, it is safe to consume or