



Book reviews

Geoenvironmental Engineering: Contaminated Soils, Pollutant Fate, and Mitigation

Raymond N. Yong, CRC Press, Boca Raton, FL, 2001, US\$ 79.95, 320 pp., ISBN 0-3493-8289-0

Geoenvironmental Engineering focuses on why soils and sediments remain contaminated, why specific contaminants remain, how much of a threat they pose to human health and to the environment, and what steps one might take to remediate it. According to the author, “The intent of this book is to provide the groundwork for a keener appreciation of some of the key factors that need to be considered when we seek to determine the fate of pollutants in soils”.

In the first chapter, Yong discusses the problem of land contamination from landfills, spills and dumping. Included in the chapter are discussions of land environmental sensitivity and tolerance and land suitability and use. In Chapters 2 and 3, the author discusses the nature of soils (fraction, structure, and physical properties). Additionally, Chapter 3 discusses soil–water systems as a topic of its own “because of the importance of soil structure and its relation to the pollutant partitioning process”. The topic of partitioning (and interaction) is the topic of Chapter 4. Heavy metal fates and partitioning is the topic of Chapter 5. Organics, their fate, persistence, and pollutants are discussed in Chapter 6. Also discussed, for organic chemical pollutants, are their adsorption and bonding mechanisms, partitioning, and interaction and fate.

These six basic concept chapters are followed by the final two chapters (Chapters 7 and 8), which “examine the interaction between pollutants and soil fractions from the viewpoint of pollutant removal” via remediation or mitigation. Discussed are both in situ and ex situ remediation treatment processes including vacuum extraction, electrokinetics, solidification and stabilization, treatment walls, chemical treatment, and biological treatment.

As interesting as the last two chapters are (to me, especially), the strength of the book predicated on the detailed discussions of the fundamentals of contaminants and contaminants’ fate.

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Guidelines for Laboratory Design: Health and Safety Considerations, 3rd Edition

Louis J. DiBerardinis, Janet S. Baum, Melvin First, Gari T. Gatwood, Anand K. Seth, (Eds.), Wiley-Interscience, New York, NY, 2001, US\$ 145.00, 640 pp., ISBN: 0-471-25447-9