

provides some useful parallels to that situation. The contributors include lawyers, environmental policy analysts, regulators, engineers, hydrologists, and the science adviser to Love Canal area residents.

Love Canal figures prominently as an example of political entanglements and the problem of obtaining a realistic assessment of past and projected health impacts. One chapter deals with the site selection process for radioactive waste repositories and advocates a geographic filter process for screening prospective sites. At this time (1986) the screening process has reached a focused stage with a limited number of potential disposal sites, largely superseding the coarser mesh proposed here.

Despite the delay in publication, most of the other papers are still valid in discussing subjects that have become increasingly of concern also on low-level radioactive waste disposal, such as the application of the Resource Conservation and Recovery Act, the application of the Superfund for decontaminating sites, and the problem of balancing industrial needs against public resistance.

For the waste management specialist this is an instructive volume to read; it may console him to think that there are many other people out there who share his problems.

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## Geology and Radwaste

<i>Author</i>	A. G. Milnes
<i>Publisher</i>	Academic Press, London (1985)
<i>Pages</i>	328
<i>Price</i>	\$60.00
<i>Reviewer</i>	Geoffrey G. Eichholz

This book, published as part of the Academic Press Geology Series, can be described as a geology primer for all who are involved politically or technically in the problem of

waste site siting or site evaluation. It presents a brief, at times too concise, discussion of the various geologic media that have been considered as host rocks, their past, and their potential future.

The first part of the book, in ~50 pages, summarizes the sources and principal characteristics of radioactive waste and reviews the various methods of disposal for high- and low-level wastes that have been practiced or proposed. The bulk of the book is entitled "Earth Science Perspectives" and provides a general review of such matters as crustal evolution, the water cycle, and geologic time frames. Two chapters discuss surface processes, such as weathering, chemical transport, and denudation and deposition processes, with Maxey Flats, uranium mill tailings degradation, and two erosion sites selected for illustration. To the specialist these examples are not really linked closely enough to geologic phenomena to permit a good site assessment.

The next three chapters deal with the formation and characteristics of sedimentary, igneous, and crystalline rocks, including such topics as the enclosure of shale or bedded salt in sedimentary rocks and the characteristics of Hanford basalt and Nevada tuff, and various alteration processes. Finally, physical and chemical processes in the upper crust are presented, as are ocean processes, such as deep sea sediments and radioactive accumulations, and continental glaciation. A brief final part reviews attempts to predict geological processes and their evolution and to evaluate potential repository sites. This in many ways is the hardest part of the procedure, and the discussion does not draw a clear picture of the long evolutionary time scales involved nor of the problem of reaching a decision in a reasonable time on the basis of informed, but necessarily never complete geologic information. The author sees this as a challenge, but does not really set up any guideposts.

To the practicing nuclear engineer this book can provide much valuable background information needed in assessing waste disposal sites, supply him with a working vocabulary, and, perhaps, explain why geologists will never commit themselves to the possibility that sufficient data that are needful may have been obtained about a given site.

The book is well illustrated, documented with an extensive bibliography, to 1984, and has an adequate index.

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