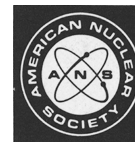


# BOOK REVIEWS

Selection of books for review is based on the editor's opinions regarding possible reader interest and on the availability of the book to the editor. Occasional selections may include books on topics somewhat peripheral to the subject matter ordinarily considered acceptable.



**Radiation for a Clean Environment**  
(Proceedings of the International Symposium on the Use of High-Level Radiation in Waste Treatment—Status and Prospects)

*Publisher* International Atomic Energy Agency (1975)  
(distributed by Unipub, Inc.)

*Pages* 672

*Price* \$41.00

*Reviewer* Charles R. Rhyner

This book is a collection of 48 papers presented at eight sessions of the symposium. The majority of the papers deal with the use of high-level radiation to treat liquid wastes and sludges, although the papers in one of the final sessions considered treatment of solid wastes and exhaust gases.

The book is remarkably well organized. The first session (chapter) consists of several review papers that survey current wastewater treatment technology. The following three sessions present topics in biology, chemistry, and physics that are pertinent to understanding the effects of radiation on micro-organisms and aqueous pollutants. Each of these sessions begins with a review paper. The second half of the book addresses the technological and economic aspects of this approach to waste treatment and the experiences obtained from pilot plant operations. The papers included in each session generally address the theme of the session, with the excep-

tion of one on the "Use of Sewage Sludge as Fodder," which has little to do with the use of radiation in waste treatment.

For some time, work on using radiation for disinfection of water and waste water has yielded promising results; however, economic considerations have not been favorable. The foreword of the book states that this conference was motivated by the world energy shortage. This implies that the central issue to be addressed is the influence of the energy shortage on the economics associated with alternative methods of water treatment. Perhaps the greatest disappointment is that the economic analysis contained in these papers is not complete enough for a realistic economic assessment of the relative costs or projected costs of various treatment alternatives. Also, a comparison of the energy intensiveness of the various treatment strategies would have aided the reader in assessing future role of this technology relative to conventional treatments.

The quality of the papers is high and uniform. The reader will also find the discussion at the end of each paper useful. This book is an excellent resource book for researchers or graduate students. Because of the inclusion of the numerous review papers and the extensive references, the book provides a good introduction for readers who are contemplating research on the use of radiation for waste treatment.

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*received his PhD from the University of Wisconsin-Madison in 1967. His graduate work was in the area of radiation physics. Since 1970, his research has been in solid waste management. He currently serves on the Brown County Solid Waste Authority (1973 to present) and the Wisconsin Legislative Council Committee on Solid Waste Management (1976-1977), which is primarily concerned with disposal of hazardous and toxic materials.*

**Reliability of Nuclear Power Plants**  
(Proceedings of a Symposium, Innsbruck, April 14-18, 1975)

*Publishers* Unipub, Inc. (1975)

*Pages* 751

*Price* \$42.00

*Reviewer* George Apostolakis

This volume contains 48 papers (of which 11 are in French and 3 in Russian with abstracts in English) that were presented at the Symposium on Reliability of Nuclear Power Plants in Innsbruck, Austria, in April 1975. The draft report of WASH-1400 was issued in August 1974, and quite naturally, the papers of the Symposium do not reflect the great impact that the report has had in the area of probabilistic risk assessments. Only occasional references to the report are made in the discussions that follow the papers, which, incidentally, are among the