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PREFACE

As of July 16, 1979, Experimental Breeder Reactor No. II (EBR-II) had been in operation for 15 years, generating a total of more than 3 826 000 MWh thermal (1 072 000 MWh electrical). Originally a demonstration breeder-reactor power plant with an integrated fuel-cycle facility in which the reactor fuel was reprocessed by completely remote methods, EBR-II in 1968 changed its primary mission to that of an irradiation test bed for nuclear fuels, absorbers, and structural materials. It continues in that role today, and as of August 20, 1979, had test-irradiated 9963 experiments in 657 subassemblies.

Throughout the years of EBR-II operation and during the 10 or so years of design, development, and construction preceding startup, the scientists and engineers associated with EBR-II have published--and continue to publish--a wealth of information related to the reactor plant and ancillary facilities. This information, representing experience and the results of study touching on just about every facet of nuclear science and technology, has been and continues to be invaluable to the nuclear-reactor, especially the breeder-reactor, community. To our knowledge, the publications containing that information have never been listed in the form of a comprehensive bibliography. The publication you are holding is an attempt to fill what we believe is a need for such a bibliography.

This bibliography is divided into 15 broad areas, or categories, of interest. These areas are listed on the Contents Page (p. iii). The same publication is listed in more than one category if its content applies to several areas of interest. Under each category, the publications are listed (1) by calendar year of publication and (2) then alphabetically by last name of the first author given. Publications that have no evident author (or compiler or editor) are listed alphabetically by title at the end of the listing for the calendar year in which they were published.

Only "open" literature (that which can be obtained through libraries and other sources available to the public) are listed herein. Not listed, even though they may be considered to be open literature, are periodic progress reports; talks and other presentations not published in proceedings,

transactions, or other readily available open literature; and publications not closely related to EBR-II even though they may have been authored or coauthored by individuals associated with EBR-II.

A word is in order about how best to obtain copies of listed publications. We recommend that the first contact normally be made with a library that has reasonably comprehensive files of scientific and technical publications. This might be a university library, a public library devoted to such literature, or, particularly for employees of Federal Government laboratories, the libraries of those facilities. The personnel in such libraries will be able to provide further guidance. For example, they may refer the inquirer to the DOE Technical Information Center (Oak Ridge, TN 37830) for purchase of technical reports (or microfiche of them) on DOE-sponsored work; examples of such reports are the ANL and ANL/EBR reports listed in this bibliography. We suggest that only as a last resort should you contact the organization that published the document, especially if the document is an older one that might very well be out of print.

Material related to EBR-II continues to be published, of course. We plan to revise this bibliography periodically to bring it up to date. The first revision is planned for publication early in 1981. It will have added to it the publications for August 1979 through December 1980.

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VII. MATERIALS AND COMPONENTS SURVEILLANCE AND STUDIES

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