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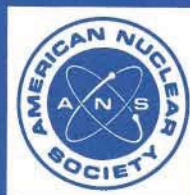
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May 13, 1997
ANSI/ANS-8.7
ANSI N16.5-1975 (R1987)

**guide for nuclear criticality safety
in the storage of fissile materials**

an American National Standard

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in the Storage of Fissile Materials

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Foreword

(This Foreword is not part of American National Standard Guide for Nuclear Criticality Safety in the Storage of Fissile Materials, N16.5-1975/ANS-8.7.)

As with many standards and guides, the direct solution to a particular problem may not be immediately evident in these pages. The application of some of the mass limits and allowances permitted in storage arrangements requires groups, or individuals, experienced in criticality to examine the possible contingencies attendant to handling massive pieces, to deviations from established procedures, or to those perturbances or mishaps commonly encountered in the use of storage areas. This Guide should not be considered as a substitute for detailed safety analyses, but rather as an integral part of the analysis for the attainment of a sound criticality safety program.

This Guide is an extension of the American National Standard for Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors, N16.1-1975/ANS-8.1. Attention to details of possible single unit criticality is, therefore, presumed. The information presented in this Guide is primarily directed to criticality safety and is based upon validated Monte Carlo calculations. Water is adopted as a standard reflector for storage arrays; because of the variety of concretes and thicknesses that may be experienced in the more usual conditions of storage, an unambiguous presentation of information is difficult.

Issuance of the Guide will provide an orientation and direction to nuclear criticality safety practices. Individual safety groups concerned with specific problems are encouraged to publish solutions to the problems, detailing the bases. In this manner, future reviews and revisions of the Guide may make use of the information to expand the areas of applicability.

Work Group ANS-8.7 of Subcommittee 8 of the American Nuclear Society Standards Committee was established in November, 1967 and prepared a number of drafts of this Guide. One draft experienced a one-year trial use and comment period in 1973. The Guide was approved by the American National Standards Committee N16 in 1974.

The membership of the Work Group ANS-8.7 that originated this document was:

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