

American Nuclear Society

REAFFIRMED

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ANSI/ANS-8.6-1983 (R2022)

safety in conducting subcritical neutron-multiplication measurements in situ

an American National Standard

REAFFIRMED

July 23, 2001

ANSI/ANS-8.6-1983
(R2001)

This standard has been reviewed and reaffirmed with the recognition that it may reference other standards and documents that may have been superseded or withdrawn. The requirements of this document will be met by using the version of the standards and documents referenced herein. It is the responsibility of the user to review each of the references and to determine whether the use of the original references or more recent versions is appropriate for the facility. Variations from the standards and documents referenced in this standard should be evaluated and documented.

This standard does not necessarily reflect recent industry initiatives for risk informed decision-making or a graded approach to quality assurance. Users should consider the use of these industry initiatives in the application of this standard

ANSI/ANS-8.6-1983 (R2001)



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**American National Standard
for Safety in Conducting Subcritical
Neutron-Multiplication Measurements In Situ**

**Secretariat
American Nuclear Society**

**Prepared by the
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Standards Committee
Subcommittee ANS-8**

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Foreword

(This Foreword is not a part of American National Standard for Safety in Conducting Subcritical Neutron-Multiplication Measurements In Situ, ANSI/ANS-8.6-1983.)

Safety guidance for operations with fissile material may be obtained from observations of the changes in neutron field arising from alterations in the quantity or arrangement of the fissile material. Measurements of such changes are common in critical facilities, but in some cases industrial safety guidance may be derived more effectively from measurements in the process area. This standard prescribes techniques and methods for making such measurements safely with fissile materials in process areas or in installed process equipment.

The standard was initiated in 1966 and a proposal was prepared by the sponsor in 1968. An American National Standards Committee processed and approved the proposal in 1969, and it was published as ANSI N16.3-1969. The prescribed five-year review resulted in minor changes and its issuance as American National Standard N16.3-1975/ANS-8.6. The present revision is the result of the second five-year review under the aegis of Subcommittee 8 of the Standards Committee of the American Nuclear Society. The present review was managed by Dr. H. C. Paxton of Los Alamos National Laboratory. This revision restates two provisions more specifically and clarifies two others.

The responsible Subcommittee, ANS-8, Fissionable Materials Outside Reactors, had the following membership at the time it approved this revision:

J. D. McLendon, Chairman, <i>Union Carbide Corporation, Nuclear Division</i>	Norman Ketzlach, <i>U. S. Nuclear Regulatory Commission</i>
Elizabeth B. Johnson, Secretary, <i>Oak Ridge National Laboratory</i>	W. G. Morrison, <i>Exxon Nuclear Idaho Company, Inc.</i>
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D. M. Dawson, <i>General Electric Company</i>	F. E. Woltz, <i>Goodyear Atomic Corporation</i>

American National Standards Committee N16, Nuclear Criticality Safety, which reviewed and approved this standard in 1982, had the following membership:

Dixon Callihan, Chairman
Elizabeth B. Johnson, Secretary

<i>Organization</i>	<i>Representative</i>
Allied-General Nuclear Services	William R. Waltz
American Institute of Chemical Engineers	Alex F. Perge
American Nuclear Society	Dixon Callihan
American Society for Testing of Materials (Liaison only)	Ricardo Artigas
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