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**use of soluble neutron
absorbers in nuclear
facilities outside reactors**

an American National Standard

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**American National Standard
Use of Soluble Neutron
Absorbers in Nuclear
Facilities Outside Reactors**

Secretariat
American Nuclear Society

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**American Nuclear Society
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Working Group ANS-8.14**

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Foreword (This foreword is not part of American National Standard “Use of Soluble Neutron Absorbers in Nuclear Facilities Outside Reactors,” ANSI/ANS-8.14-2004)

This standard provides guidance for the use of soluble neutron absorbers for process and handling operations in which solutions of neutron absorbers are used for criticality control. This standard supplements the provisions for “Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors,” ANSI/ANS-8.1-1998, in providing more detailed guidance for the use of soluble neutron absorbers. Soluble neutron absorbers can be used as a primary means of criticality safety control or as defense in depth to provide an additional safety margin and as such make the safety of the system more robust. As with any parameter controlled for criticality safety, and particularly important with soluble neutron absorbers, one must ensure that the controlled parameter is maintained within the range that has been shown by experiment or evaluation to maintain subcriticality.

This standard prepared by Working Group ANS-8.14 was composed of the following members:

T. A. Reilly (Chairman), *Westinghouse Safety Management Solutions, LLC*

R. D. Carter (Past Chairman), *Individual*

L. J. Berg, *U.S. Nuclear Regulatory Commission*

A. S. Garcia, *U.S. Department of Energy, Idaho*

R. A. Knief, *XE Corporation*

R. C. McBroom, *U.S. Department of Energy, Oak Ridge Operations Office*

L. M. Montierth, *Idaho National Engineering and Environmental Laboratory*

J. A. Morman, *Argonne National Laboratory*

V. L. Risner, *USEC*

S. K. Skiles, *NuclearSafety Associates*

R. E. Wilson, *U.S. Department of Energy, Rocky Flats Environmental Technology Site*

This standard was prepared under the guidance of Subcommittee 8, Fissionable Materials Outside Reactors, of the American Nuclear Society. Subcommittee 8 at the time of initial ballot was composed of the following members:

T. P. McLaughlin (Chairman), *Los Alamos National Laboratory*

J. A. Schlessler (Secretary), *Westinghouse Safety Management Solutions, LLC*

F. M. Alcorn, *Individual*

E. D. Clayton, *Individual*

A. S. Garcia, *U.S. Department of Energy, Idaho*

N. Harris, *BNFL*

C. M. Hopper, *Oak Ridge National Laboratory*

R. Kiyose, *Individual*

R. A. Libby, *Pacific Northwest National Laboratory*

D. A. Reed, *Oak Ridge National Laboratory*

T. A. Reilly, *Westinghouse Safety Management Solutions, LLC*

H. Toffer, *Fluor Federal Services*

G. E. Whitesides, *Individual*

Consensus Committee N16, Nuclear Criticality Safety, was composed of the following members at the time of approval:

C. M. Hopper (Chairman), *Oak Ridge National Laboratory*

R. A. Knief (Vice-Chairman), *XE Corporation*

G. H. Bidinger, *Individual*

R. D. Busch, *University of New Mexico*

M. S. Chatterton, *U.S. Nuclear Regulatory Commission*

H. L. Dodds, Jr., *University of Tennessee*

R. S. Eby, *American Institute of Chemical Engineers*

C. D. Manning, *Framatome ANP*

B. McLeod, *Institute of Nuclear Materials Management*

S. P. Murray, *Health Physics Society*

H. C. Paxton, *Individual*
R. L. Reed, *Westinghouse Safety Management Solutions, LLC*
B. M. Rothleder, *U.S. Department of Energy*
F. W. Sanders, *Individual*
D. R. Smith, *Individual*
R. G. Taylor, *Individual*
J. T. Thomas, *Individual*
R. M. Westfall, *Oak Ridge National Laboratory*

Contents	Section	Page
	1 Introduction	1
	2 Scope	1
	3 Definitions	1
	3.1 Limitations	1
	3.2 Shall, Should, May	1
	3.3 Glossary of Terms	1
	4 Administrative Requirements and Guidance	2
	4.1 Neutron Absorber Selection	2
	4.2 System Design and System Modifications	2
	4.3 Criticality Safety Evaluations	2
	4.4 Quality Control Program	3
	4.5 Facility Operation with Soluble Absorbers	3
	5 References	3