American Nuclear Society

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the development of technical specifications for research reactors

an American National Standard

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American National Standard for The Development of Technical Specifications for Research Reactors

Secretariat
American Nuclear Society

Prepared by the
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Working Group ANS-15.1

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American National Standard

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Foreword

(This Foreword is not a part of American National Standard for The Development of Technical Specifications for Research Reactors, ANSI/ANS-15.1-1990.)

ANS-15.1, "The Development of Technical Specifications for Research Reactors," is the principal standard developed under the direction of Subcommittee ANS-15, Operation of Research Reactors. The standard impacts research reactors of every type and size and has been widely used by most of them. The current version incorporates three previously published standards: Records and Reports for Research Reactors, ANS-15.3-1974; Review of Experiments for Research Reactors, ANS-15.6-1974; and Standard for Administrative Controls for Research Reactors, ANS-15.18-1979. Certain segments of this standard may be useful to Critical Experiment Facilities; however, these facilities should continue to use American National Standard Safety Guide for the Performance of Critical Experiments, ANSI/ANS-1-1987.

The membership of ANS-15.1 at the time of the completion of the standard was:

T. M. Raby, Chairman, *National Institute of Standards & Technology*
A. Adams, Jr., *U.S. Nuclear Regulatory Commission*
J. P. Farrar, *University of Virginia*
D. E. Feltz, *Texas A&M University*
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W. G. Vernetson, *University of Florida*
R. R. Walston, *U.S. Department of Energy*
S. H. Weiss, *U.S. Nuclear Regulatory Commission*

In the process of creating this standard with respect to existing and varied practices in many operating facilities, it is important to consider that:

a. It is not intended that the standard be used as a demand model for backfitting purposes.
b. Its provisions should be used only to the extent applicable to the individual facility.
c. It should be a significant aid for existing and new owner or operator, or both.
d. It should be helpful for the facility undergoing change or modification, or both.
e. Its considered use should assist in implementing regulatory requirements.

This standard addresses itself to technical specifications for and administrative control of research reactors. However, the administrative control section specified in this standard includes a review and audit section which effectively provides for the function of operational quality assurance at research reactors. Additional standards have been prepared addressing subjects such as siting, effluent evaluation, and other areas of interest and concern to operators of research reactors.

Guidance may be found in the following supplementary American National Standards developed for research reactors:

Quality Control for Plate-Type Uranium-Aluminum Fuel Elements, ANSI/ANS-15.2-1990 (Revision of N398-1974)

Selection and Training of Personnel for Research Reactors, ANSI/ANS-15.4-1988 (Revision of ANSI/ANS-15.4-1977)

Research Reactor Site Evaluation, ANSI/ANS-15.7-1977 (R1986)

Quality Assurance Program Requirements for Research Reactors, ANSI/ANS-15.8-1976 (R1986)

Decommissioning of Research Reactors, ANSI/ANS-15.10-1981 (R1987)

Radiation Protection at Research Reactor Facilities, ANSI/ANS-15.11-1987 (Revision of ANSI/ANS-15.11-1977)

Criteria for the Reactor Safety Systems at Research Reactors, ANSI/ANS-15.15-1978 (R1986)

Emergency Planning for Research Reactors, ANSI/ANS-15.16-1982 (R1988)

Fire Protection Program Criteria for Research Reactors, ANSI/ANS-15.17-1981 (R1987).

The membership of Subcommittee ANS-15 at the time of its approval of the standard was:

W. J. Richards, Chairman, *U.S. Department of Defense*
A. Adams, Jr., *U.S. Nuclear Regulatory Commission*
W. J. Brynda, *Brookhaven National Laboratory*
B. L. Corbett, *ORNL, Martin Marietta Energy Systems, Inc.*
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Consensus Committee N17, Research Reactors, Reactor Physics, Radiation Shielding, and Computational Methods, had the following membership at the time it reviewed and approved this standard:

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A. Weitzberg, Vice Chairman

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A. D. Callihan ..... Individual
R. E. Carter ..... Individual
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