American Nuclear Society

WITHDRAWN

standard for administrative controls for research reactors

an American National Standard

published by the
American Nuclear Society
555 North Kensington Avenue
La Grange Park, Illinois 60525 USA

ANSI/ANS-15.18-1979

American National Standard for Administrative Controls for Research Reactors

Secretariat
American Nuclear Society

Prepared by the
American Nuclear Society
Standards Committee
Working Group ANS-15.18

Published by
American Nuclear Society
555 North Kensington Avenue
La Grange Park, Illinois 60525 USA

Approved February 12, 1979
by the
American National Standards Institute, Inc.

American National Standard

An American National Standard implies a consensus of those substantially concerned with its scope and provisions. An American National Standard is intended as a guide to aid the manufacturer, the consumer, and the general public. The existence of an American National Standard does not in any respect preclude anyone, whether he has approved the standard or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standard. American National Standards are subject to periodic review and users are cautioned to obtain the latest editions.

CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken to reaffirm, revise, or withdraw this Standard no later than five years from the date of publication. Purchasers of this Standard may receive current information, including interpretation, on all standards published by the American Nuclear Society by calling or writing to the Society.

Published by

American Nuclear Society
555 North Kensington Avenue, La Grange Park, Illinois 60525 USA

Price: $16.00

Printed in the United States of America

Foreword

(This Foreword is not a part of American National Standard for Administrative Controls for Research Reactors, ANSI/ANS-15.18-1979.)

A complex development history must be told to enable the reviewing agencies to properly evaluate this standard. Formally, the standard has been under development for fifteen months; technically only four months, for the Scope was not approved for action until September of 1977. Neither of these periods actually reflect the developmental history.

Based on the content of N378-1974 (ANS-15.1), American National Standard for the Development of Technical Specifications for Research Reactors the need for a standalone standard of the nature of ANS-15.18 was not envisioned. However, for their own sufficient reason, U.S. Nuclear Regulatory Commission undertook in late summer, 1975, to develop a rigorous, standardized Section 6 for Research Reactor Technical Specifications. At the November 1975 meeting of ANS-15 a draft copy of the proposed Section 6 was made available to ANS-15. Ensuing discussions and exchanges of letters revealed the NRC objective was transmittal of the document to all Research Reactor facilities for their proposed "appropriate" application of the standard administrative controls. On March 9, the Chairman of ANS-15 was advised of an end date of April 15 for comment on the NRC November draft — that in April the "maximum specification" for Section 6 would be sent to all licensees requesting response proposals (not review). The chairman was advised that ANS-15 should develop a schedule for NRC consideration for a similar effort on all other sections of Technical Specifications.

In this frame of reference, ANS-15 expedited a review of the proposed Section 6 and through extended organizational activities such as the TRIGA owners and the Reactor Managers groups was able to gather, consolidate and transmit to NRC on March 31, 1976, a major community reaction, almost entirely negative. Insofar as ANS-15 had been advised to expect no formal response to any submitted comments, and that a release of the "maximum specification" was imminent, ANS-15 took additional steps to attempt to interdict the release, including correspondence with NRC Management and with the ANS Executive Committee. Good response was achieved and a meeting with NRC Management personnel was arranged in conjunction with the ANS-15 meeting in Toronto, Ontario, June, 1976. Release of the proposed Section 6 was deferred.

As a result of the June meeting, ANS-15 was invited by NRC to take up the preparation of an appropriate administrative controls document which would accomplish the NRC ends and would reflect the approval of the Research Reactor community. Such an effort would, in the NRC Management view, be a major contribution to the research reactor community, and specifically, would tend to arbitrate any issue of regulatory caprice.

At the June, 1976, meeting ANS-15 established a Task Group to develop a recommendation for Subcommittee action from the several options:

— Decline to participate,

— Prepare several standardized Administrative Controls reflecting the various reactor categories,

— Similarly, prepare several Standards for the Development of Administrative Controls,

— Prepare one umbrella Standardized Administrative Controls Document,

— Prepare a single Standard for the Development of Administrative Controls.

The Task Group formed was:

D. Hanlen (Coordinator), *Brown & Root, Inc.*
J. Carter, *U.S. Nuclear Regulatory Commission*
L. Constable, *U.S. Nuclear Regulatory Commission*
T. Raby, *National Bureau of Standards, Gaithersburg*
J. Randall, *Texas A & M*
W. Richards, *Argonne West*
D. Walthousen, *Rensselaer Polytechnic Institute*
W. Whittemore, *General Atomic Company*

For reasons documented in the transmittal of Draft Two on October 18, 1976 to the Task Group membership, the single standard (last listed) option was selected. The Task Group was then assigned Work Group status and formally identified as ANS-15.18. NOTE: The second draft of the document was actually an augmented composite of several first drafts, each representing a different research reactor type or operating power level.

Working through both correspondence and personal contact, the Work Group developed a third draft for Subcommittee review in March, 1977. Several changes were then initiated by the co-chairmen of the Work Group. In May, 1977, Draft Four was sent to general ANS-15 membership with a request for review and detailed comment.

The resultant, consolidated review comments were resolved in August, 1977, at the Subcommittee's general meeting in Chattanooga and Draft Five was released to ANS-15 for ballot on October 28, 1977. The comments were reviewed and resolved; and Draft Six dated January, 1978, was developed with appropriate editorial adjustments to facilitate useability (e.g., internal repetition for continuity; language that permits verbatim use in technical specification).

In this process of creating standards against a background of established and varied practices in many operating facilities, it is important to consider:

a. It is not appropriate that a standard be a demand model for backfitting purposes. Backfitting considered appropriate by the participating agencies should be implemented only after careful planning and preparations over an extended period of time.

b. The standard should be a vital aid for the new owner-agency.

c. The standard should be helpful for the facility undergoing change/modification.

d. Thoughtful use of the standard by industry and by regulatory agencies should ease the administrative and operations burdens of both.

We affirm that the use of any standard of performance, conduct or excellence is volitional. The decision to use a standard is a management matter, presumably on technical advisement. The institutionalizing of a standard can and almost must be conditional; i.e., high probability exists that some exception or addition will compromise the absolute, unconditional application of a document which was composed to cross lines of functional and material discipline.

It is a management function to ameliorate or mitigate conditional matter. It is not the function of a standard to attempt to accommodate the many different management systems. Neither is its function to preempt management prerogatives.

This standard is promulgated in the context of these considerations, and in the context of a family of related research reactor standards, a Work Group and an actively participating Subcommittee in an atmosphere of direct exchange of ideas across multi-discipline and multi-system boundaries.

The family of standards and task assignments include:

ANS-15.1 (N378): Development of Technical Specifications (N378-1974)
ANS-15.2 (N398): Quality Verification for Plate-type U-AL Fuel Elements (N398-1974)
ANS-15.3 (N399): Records and Reports (N399-1974)
ANS-15.4 (N380): Selection and Training of Personnel (ANSI//ANS-15.4-1977)
ANS-15.6 (N401): Review of Experiments (N401-1974)
ANS-15.7 (N379): Site Evaluation (N379/ANS-15.7-1977)
ANS-15.8 (N402): Quality Assurance Program Requirements (N402-1976)
ANS-15.10 (N440): Decommissioning
ANS-15.11 (N628): Radiological Control (N628/ANS-15.11-1977)
ANS-15.12 (N647): Design Criteria — Effluents (ANSI/ANS-15.12-1977)
ANS-15.14 (N700): Physical Security
ANS-15.15 (N701): Reactor Safety Systems
ANS-15.17 Fire Protection
ANS-15.18 Administrative Controls

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

D. F. Hanlen (Chairman), *Brown & Root, Inc.*
M. A. Bell, *U.S. Department of Energy*
F. T. Binford, *Oak Ridge National Laboratory*
L. Bonzon, *Sandia Laboratory*
J. Carter, *U.S. Nuclear Regulatory Commission*
T. R. Crites, *Lawrence Livermore Laboratories*
R. Curtis, *U.S. Nuclear Regulatory Commission*
A. C. Ellingson, *Sandia Laboratory*
P. Farrar, *University of Virginia*
G. Geisler, *Pennsylvania State University*
P. Kraker, *U.S. Geologic Survey, Denver*
T. M. Raby, *U.S. National Bureau of Standards*
W. J. Richards, *Argonne National Laboratory-West*
R. R. Walston, *U.S. Department of Energy*
W. L. Whittemore, *General Atomic Company*

The American National Standards Committee N17, Research Reactors, Reactor Physics, and Radiation Shielding, had the following membership at the time it reviewed and approved this Standard:

W. L. Whittemore, Chairman
R. S. Carter, Secretary

Organizations Represented	*Name of Representative*
American College of Radiology	M. TerPogossian
American Institute of Chemical Engineers	R. Duffy
American Nuclear Society	W. L. Whittemore
American Physical Society	W. W. Havens, Jr.
	H. Goldstein (Alt)
American Public Health Association	W. A. Holt
American Society of Mechanical Engineers	R. A. Axford
American Society of Radiologic Technologists	J. H. Tolan
Health Physics Society	C. A. Willis
Institute of Electrical & Electronics Engineers	E. A. Corte
National Bureau of Standards	R. S. Carter
	T. M. Raby (Alt)
National Council on Radiation Protection & Measurement	A. B. Chilton
U.S. Nuclear Regulatory Commission	K. R. Goller
	R. J. Schemel (Alt)
U.S. Department of Energy	P. B. Hemmig
	J. W. Lewellen (Alt)
Individual Members	J. E. Olhoeft
	E. A. Warman

Contents