

American National Standard

WITHDRAWN

**radiological control at
research reactor facilities**



published by the
American Nuclear Society
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**American National Standard for
Radiological Control at
Research Reactor Facilities**

Secretariat
American Nuclear Society

Prepared by the
**American Nuclear Society
Standards Committee
Working Group ANS-15.11**

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American National Standard

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Foreword

(This Foreword is not part of American National Standard Radiological Control at Research Reactor Facilities, ANSI/ANS-15.11-1977)

The ANS Standards Secretariat established Subcommittee ANS-15 in the fall of 1970 with the task of preparing a standard for the operation of research reactors. In January 1972 this charter was expanded to the multiple tasks of preparing all standards for research reactors. To implement this enlarged responsibility, a number of Subcommittee Work Groups have been established to develop standards for consideration and complementary action by Subcommittee ANS-15. ANS-15.11 is one of these groups.

Working Group ANS-15.11 was assigned the task of developing a draft standard for radiological control in January 1974 with the following membership:

Pat Kraker (Chairman), *U.S. Geological Survey, Denver*
Richard Curtis, *U.S. Nuclear Regulatory Commission, Walnut Creek, California*
Art Johnson, *Oregon State University*

The draft standard developmental program, reflecting the extensive interplay of ANS-15 and the daughter Work Groups, was as follows:

- | | |
|---|--|
| 1. Work Group task established | October, 1973 - Denver |
| 2. Work Group formed | January, 1974 - Chairman |
| 3. Work Group meeting (draft document) | February, 1974 - Albuquerque |
| 4. ANS-15 review and restructuring | April, 1974 - Chicago |
| 5. ANS-15 approval of Scope & Progress | August, 1974 - Charlottesville |
| 6. Work Group meeting (draft document) | September, 1974 - Berkeley |
| 7. ANS-15 detail review and restructuring | October, 1974 - Washington |
| 8. Work Group meeting (draft document) | November, 1974 - Corvallis |
| 9. Peer Group review (75 facilities) | December, 1974 - Mail Liaison |
| 10. ANS-15 detail review, edit, approve | February, 1975 - Albuquerque |
| 11. Released to N-17 for processing | March, 1975 |
| Released to BSR-ANSI | April, 1975 |
| 12. Work Group meeting (accomodate N-17 comments) | August, 1975 - Albuquerque |
| 13. ANS-15 review | December, 1975 - San Francisco |
| 14. Draft No. 6 prepared (to accomodate ANS-15 comments) | January, 1976 - Telephone and mail liaison |
| 15. Submitted to Chairman for processing by N-17 and BSR | January, 1976 |
| 16. Draft No. 7 prepared (to accomodate N-17 comments - submitted to Chairman for processing) | May, 1976 - Telephone and mail liaison |
| 17. Draft No. 7 resubmitted to BSR-ANSI | September, 1976 |
| 18. Draft No. 8 prepared to accomodate new N-17 comments | January, 1977 |

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

- a. It is not intended that the standard be used as a demand model for backfitting purposes.
- b. It should be a vital aid for the new owner-agency.
- c. It should be helpful for the facility undergoing change/modification.
- d. Its thoughtful use by industry should ease the burden of regulatory agencies.

We affirm, further, 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 management's function to ameliorate or mitigate conditional matters. 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
- ANS-15.2 (N398): Quality Verification of Plate-type V-A1 Fuel Elements
- ANS-15.3 (N399): Records and Reports
- ANS-15.4 (N380): Selection and Training of Personnel
- ANS-15.6 (N401): Review of Experiments
- ANS-15.7 (N379): Site Evaluation
- ANS-15.8 (N402): Quality Assurance Program Requirements
- ANS-15.10 (N550): Decommissioning
- ANS-15.11 (N628): Radiological Control
- ANS-15.12 (N647): Design Criteria for Systems Controlling Effluents . . .
- ANS-15.13 (): Allowed Core Alterations
- ANS-15.14 (N700): Physical Security
- ANS-15.15 (N701): Core Protective Systems
- ANS-15.16 (): Emergency Planning

The membership of Subcommittee ANS-15, Operation of Research Reactors, at the time of approval of this Standard was:

- | | |
|--|---|
| Don F. Hanlen (Chairman), <i>Brown & Root, Inc.</i> | George Geisler, <i>Pennsylvania State University</i> |
| Mayhue A. Bell, <i>U.S. Energy Research and Development Administration, Washington</i> | Pat Kraker, <i>U.S. Geological Survey, Denver</i> |
| James R. Bohannon, <i>North Carolina State University</i> | J. Lawrence Meem, <i>University of Virginia</i> |
| Lloyd Bonzon, <i>Sandia Laboratory</i> | Tawfik M. Raby, <i>U.S. National Bureau of Standards, Washington</i> |
| James A. Cox, <i>Oak Ridge National Laboratory</i> | Wade J. Richards, <i>Lawrence Livermore Laboratories</i> |
| Richard Curtis, <i>U.S. Nuclear Regulatory Commission, Walnut Creek</i> | Robert Schemel, <i>U.S. Nuclear Regulatory Commission, Albuquerque</i> |
| Monte V. Davis, <i>Georgia Institute of Technology</i> | Robert R. Walston, <i>U.S. Nuclear Regulatory Commission, Albuquerque</i> |
| A. C. Ellingson, <i>Sandia Laboratory</i> | William L. Whittemore, <i>Gulf General Atomic</i> |
| Thomas P. Flood, <i>U.S. Nuclear Regulatory Commission, Washington</i> | |

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

<i>Organization Represented</i>	<i>Name of Representative</i>
American College of Radiology.....	Michel M. TerPogossian
American Institute of Chemical Engineers.....	Richard Duffy
American Nuclear Society	W. L. Whittemore
American Physical Society	W. W. Havens, Jr. Herbert Goldstein (Alt)
American Public Health Association.....	Charles G. Amato William A. Holt (Alt)
American Society of Mechanical Engineers.....	Roy A. Axford
American Society of Radiologic Technologists	John H. Tolan
Health Physics Society	Charles A. Willis
Institute of Electrical & Electronics Engineers	H. A. Thomas
National Bureau of Standards	R. S. Carter Tawfik M. Raby (Alt)
National Council on Radiation Protection & Measurement	Arthur B. Chilton
U.S. Nuclear Regulatory Commission	Karl R. Goller Robert J. Schemel (Alt)
U.S. Energy Research & Development Administration	Phillip B. Hemmig John W. Lewellen (Alt)
Individual Members.....	J. E. Olhoeft Alfred M. Perry E. A. Warman

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