

# American Nuclear Society

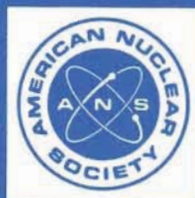
**WITHDRAWN**

December 31, 1996  
ANSI/ANS-8.3-1986

**criticality accident alarm system**

an American National Standard

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**ANSI/ANS-8.3-1986**  
**Revision of**  
**ANSI/ANS-8.3-1979**

**American National Standard**  
**Criticality Accident Alarm System**

Secretariat  
**American Nuclear Society**

Prepared by the  
**American Nuclear Society**  
**Standards Committee**  
**Working Group ANS-8.3**

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by the  
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## Foreword

(This Foreword is not a part of American National Standard Criticality Accident Alarm System, ANSI/ANS-8.3-1986.)

The usefulness and protective features of criticality alarm systems have been demonstrated in instances of accidental criticality that have occurred during the processing of fissionable materials. This standard provides guidance for the establishment and maintenance of an alarm system to initiate personnel evacuation in the event of inadvertent criticality. Preparation of the standard, begun in 1966, resulted in the issuance of N16.2-1969, and an initial revision was issued in 1979. This revision incorporates relevant features of ANSI/ANS-8.3-1979 and American National Standard Immediate Evacuation Signal for Use in Industrial Installations, ANSI N2.3-1979. N2.3 was originally developed under the aegis of Committee N2 of the American Standards Association. The 1979 revision was sponsored by American National Standards Committee N16.

ANSI N2.3-1979 and ANSI/ANS-8.3-1979 were concurrently undergoing revision and review in 1979. Several reviewers suggested that the two documents, each concerned with immediate evacuation of process areas, should be combined. It was decided that development of the combined document at that time would result in undesired delays, but that the next revision of these two standards should attempt consolidation. The current revision provides this consolidation by adding important features of N2.3-1979 to ANSI/ANS-8.3-1979 and deleting the section of ANS-8.3 that addressed emergency planning. This deletion reflected a long-recognized position that emergency planning was not properly part of an alarm standard. Guidance for emergency planning can now be found in American National Standard Administrative Practices for Nuclear Criticality Safety, ANSI/ANS-8.19-1984, and does not need to be retained in the alarm standard.

This revision was prepared by ANS Standards Subcommittee 8, sitting as a committee of the whole, with additional participation by James E. McLaughlin, Radiation Protection Officer, University of California at Los Angeles. The membership of ANS-8 at the time of the standard's approval was:

J. T. Thomas, Chairman, <i>Martin Marietta Energy Systems Inc.</i>	M. C. Evans, <i>British Nuclear Fuels plc</i>
E. B. Johnson, Secretary, <i>Oak Ridge National Laboratory</i>	N. Ketzlach, <i>U. S. Nuclear Regulatory Commission</i>
F. M. Alcorn, <i>Babcock &amp; Wilcox Company</i>	R. Kiyose, <i>University of Tokyo</i>
H. K. Clark, <i>Savannah River Laboratory</i>	W. G. Morrison, <i>Exxon Idaho Nuclear Company (retired)</i>
E. D. Clayton, <i>Battelle Pacific Northwest Laboratories</i>	D. R. Smith, <i>Los Alamos National Laboratory</i>
D. M. Dawson, <i>Battelle Memorial Institute</i>	G. E. Whitesides, <i>Martin Marietta Energy Systems</i>
	F. E. Woltz, <i>Goodyear Atomic Corporation</i>

Consensus Committee N16, Nuclear Criticality Safety, which reviewed and approved this standard in 1985, had the following membership:

Dixon Callihan, Chairman  
E. B. Johnson, Secretary

Alex F. Perge ..... American Institute of Chemical Engineers  
Dixon Callihan ..... American Nuclear Society  
Ricardo Artigas ..... American Society for Testing and Materials (Liaison only)  
D. Frank Cronin ..... Atomic Industrial Forum  
Leo E. Hansen ..... Exxon Nuclear Company, Inc.  
Representative not Assigned ..... Health Physics Society  
C. Leslie Brown ..... Institute of Nuclear Materials Management  
William T. Mee, alt.  
William R. Waltz ..... Savannah River Laboratory  
Blake P. Brown ..... U. S. Department of Energy  
George H. Bidinger ..... U. S. Nuclear Regulatory Commission  
Elizabeth B. Johnson, Individual  
Hugh C. Paxton, Individual  
Fred W. Sanders, Individual

<b>Contents</b>	<b>Section</b>	<b>Page</b>
	1. Introduction .....	1
	2. Scope .....	1
	3. Definitions .....	1
	3.1 Limitations .....	1
	3.2 Shall, Should, and May .....	1
	3.3 Glossary of Terms .....	1
	4. General Principles .....	1
	4.1 General .....	1
	4.2 Coverage .....	2
	4.3 Detection .....	2
	4.4 Alarm .....	2
	4.5 Dependability .....	2
	5. Criteria for System Design .....	3
	5.1 Reliability .....	3
	5.2 System Vulnerability .....	3
	5.3 Seismic Tolerance .....	3
	5.4 Failure Warning .....	3
	5.5 Response Time .....	3
	5.6 Detection Criterion .....	3
	5.7 Sensitivity .....	3
	5.8 Spacing .....	3
	6. Testing .....	3
	6.1 Initial Tests .....	3
	6.2 Tests Following Repairs .....	3
	6.3 Response to Radiation .....	3
	6.4 Periodic Tests .....	4
	6.5 Corrective Action .....	4
	6.6 Test Procedures .....	4
	6.7 Records .....	4
	7. Employee Familiarization .....	4
	7.1 Posted Instructions .....	4
	7.2 Training .....	4
	7.3 Evacuation Drills .....	4
	8. References .....	4