

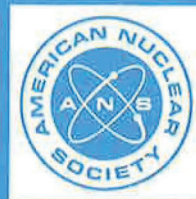
American Nuclear Society

WITHDRAWN

**nuclear criticality safety guide for
pipe intersections containing aqueous
solutions of enriched uranyl nitrate**

an American National Standard

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**American National Standard
Nuclear Criticality Safety Guide for
Pipe Intersections Containing
Aqueous Solutions of Enriched
Uranyl Nitrate**

Secretariat
American Nuclear Society

Prepared by the
**American Nuclear Society
Standards Committee
Work Group ANS-8.9**

Published by the
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Foreword

(This Foreword is not a part of American National Standard Nuclear Criticality Safety Guide for Pipe Intersections Containing Aqueous Solutions of Enriched Uranyl Nitrate, ANSI/ANS-8.9-1978).

Basic parameters and practices for nuclear criticality safety control outside reactors are described in American National Standard for Nuclear Criticality Safety in Operations with Fissionable Materials Outside Reactors, N16.1-1975 (ANS-8.1), and in documents referenced therein. However, for the most part, the data in N16.1 are limited to single parameter limits.

In the past there has been a paucity of experimental and calculated data for geometric arrangements, such as crosses, ells, and tees, for storage and processing of aqueous solutions of fissionable materials in pipes. This situation resulted in overly conservative applications which became evident soon after the Work Group undertook the drafting of a standard on this subject in 1968. Over the succeeding years, additional experimental data and advanced computational technology became available and now provide the means to reduce the over-conservatism in industrial practice and permit greater flexibility in process applications for highly enriched uranium. It is anticipated that these considerations will be extended to the near future to a wider range of ^{235}U enrichments and other fissionable materials.

This Guide was prepared by Work Group ANS-8.9, under the guidance of American Nuclear Society Standards Subcommittee 8; the Work Group had the following membership:

W. A. Johnson, Chairman, <i>U.S. Energy Research and Development Administration</i>	W. T. Mee, <i>Union Carbide Corporation, Nuclear Division</i>
W. R. Carpenter, <i>EG&G Idaho, Inc.</i>	W. G. Morrison, <i>Allied Chemical Corporation</i>
D. Dickinson, <i>Rockwell International, Rocky Flats Plant</i>	C. L. Schuske, <i>Rockwell International, Rocky Flats Plant</i>
	G. E. Whitesides, <i>Oak Ridge National Laboratory</i>

The membership of Subcommittee 8, Fissionable Materials Outside Reactors, at the time of draft preparation was:

J. D. McLendon, Chairman, <i>Union Carbide Corporation, Nuclear Division</i>	W. A. Johnson, <i>U.S. Energy Research and Development Administration</i>
F. M. Alcorn, <i>Babcock and Wilcox Company</i>	W. G. Morrison, <i>Allied Chemical Corporation</i>
H. K. Clark, <i>Savannah River Laboratory</i>	Norman Ketzlach, <i>U.S. Nuclear Regulatory Commission</i>
E. D. Clayton, <i>Battelle Pacific Northwest Laboratories</i>	David R. Smith, <i>Los Alamos Scientific Laboratory</i>
D. M. Dawson, <i>General Electric Company</i>	J. T. Thomas, <i>Oak Ridge National Laboratory</i>
E. B. Johnson, Secretary, <i>Union Carbide Corporation, Nuclear Division</i>	G. E. Whitesides, <i>Oak Ridge National Laboratory</i>
	Frank E. Woltz, <i>Goodyear Atomic Corporation</i>

The American National Standards Committee N16, Nuclear Criticality Safety, which reviewed and approved this Standard in 1977, had the following membership:

Dixon Callihan, Chairman
E. B. Johnson, Secretary

<i>Organization Represented</i>	<i>Name of Representative</i>
American Institute of Chemical Engineers	Alex Perge
American Nuclear Society	Dixon Callihan
American Society for Testing and Materials	A. N. Tschaeche
	John H. Bystrom (Alt)
Atomic Industrial Forum, Inc.	D. F. Cronin
Health Physics Society	Fred Sanders
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Institute of Nuclear Materials Management	C. Leslie Brown
	George Wuller (Alt)
U.S. Energy Research and Development Administration	Wade C. McCluggage
U.S. Nuclear Regulatory Commission	R. L. Stevenson
U.S. Public Health Service	Robert Jacobs
Individual Members	E. B. Johnson
	H. C. Paxton

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