American Nuclear Society

REAFFIRMED
March 18, 2008
ANSI/ANS-58.3-1992 (R2008)
January 11, 2018
ANSI/ANS-58.3-1992 (R2018)

physical protection for nuclear safety-related systems and components

an American National Standard

REAFFIRMED
October 28, 1998
ANSI/ANS-58.3-1992 (R1998)

This standard has been reviewed and reaffirmed with the recognition that it may reference other standards and documents that may have been superseded or withdrawn. The requirements of this document will be met by using the version of the standards and documents referenced herein. It is the responsibility of the user to review each of the references and to determine whether the use of the original references or more recent versions is appropriate for the facility. Variations from the standards and documents referenced in this standard should be evaluated and documented.
This standard does not necessarily reflect recent industry initiatives for risk informed decision-making or a graded approach to quality assurance. Users should consider the use of these industry initiatives in the application of this standard.

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ANSI/ANS-58.3-1992

Addendum to ANSI/ANS-58.3-1992 (R2008) Foreword

[The foreword and this addendum are not part of American National Standard "Physical Protection for Nuclear Safety-Related System and Components," ANSI/ANS-58.3-1992 (R2007)]

The scope of the ANS-58.3 standard is to identify potential natural phenomena and accident safety hazards to light water nuclear power plants and to discuss in general terms means for protecting against such hazards, except for missiles where simplified first order methods to resist missile effects are presented in Appendix B. The term "physical protection" originally was related to accidental and natural hazards. In recent years, it has come to be associated with safeguard requirements associated with acts of sabotage and land, sea, or air malevolent vehicle intrusion.

With the present-day definition of "physical protection," it would be fitting to revise the title to "Natural Phenomena and Accident Hazards for Nuclear Safety-Related Systems and Components." However, American National Standards Institute requirements do not permit any changes to a current standard through reaffirmation. As the foreword is not considered part of the standard, it is acceptable to include this addendum.

The safety hazards identified in this standard are still applicable to the design of nuclear facilities and as such should still be identified in an American Nuclear Society standard. To the extent the standard serves as a guide to the natural phenomena and accident hazards to be considered in nuclear facility design, it serves a useful purpose to the nuclear industry. For this reason the standard was reaffirmed in 2008. Currently, safeguards design requirements that have been identified by regulatory authorities are outside the scope of this standard.

Furthermore, we'd like to acknowledge a large effort by the U.S. Army Corps of Engineers (COE) and the American Society of Civil Engineers (ASCE) on the subject of this standard. It is believed that the COE and ASCE documents will in time cover most of the details in ANS-58.3. Once these documents are finalized, they will be reviewed and addressed in a revision of this standard if determined appropriate.

American National Standard for Physical Protection for Nuclear Safety-Related Systems and Components

Secretariat
American Nuclear Society

Prepared by the
American Nuclear Society
Standards Committee
Working Group ANS-58.3

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Approved August 6, 1992
by the
American National Standards Institute, Inc.

American National Standard

Designation of this document as an American National Standard attests that the principles of openness and due process have been followed in the approval procedure and that a consensus of those directly and materially affected by the standard has been achieved.

This standard was developed under the procedures of the Standards Committee of the American Nuclear Society; these procedures are accredited by the American National Standards Institute, Inc., as meeting the criteria for American National Standards. The consensus committee that approved the standard was balanced to ensure that competent, concerned, and varied interests have had an opportunity to participate.

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Comments on this standard are encouraged and should be sent to Society Headquarters.

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Foreword

(This foreword is not part of American National Standard Physical Protection for Nuclear Safety-Related Systems and Components, ANSI/ANS-58.3-1992.)

The working group revised this standard based on the assumptions that a stationary light water reactor power plant design team would use this standard in conjunction with many other standards, codes, and regulations. The effort was to make this standard as broad as possible to cause the designers to consider every relevant area based on industry experience to date. Details in any particular area would come from standards specific to that area.

A draft standard on plant design against missiles was issued for trial use and comment in 1974 as ANSI/N177 (ANS-58.1). This work is included as a nonmandatory appendix.

Working Group ANS-58.3 consists of the following members:

H. C. Shaffer III, Chairman, *Yankee Atomic Electric Company*
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J. Conant, *Combustion Engineering, Inc.*
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R. C. Surman, *Westinghouse Electric Corporation*, provided assistance in the resolution of probabilistic approaches that are now discussed only in parent standards ANSI/ANS-51.1-1983 (R1988) and ANSI/ANS-52.1-1983 (R1988).

The membership of MC-1, Light Water Reactor Criteria Management, at the time it reviewed this standard was as follows:

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The American Nuclear Society's Nuclear Power Plant Standards Committee (NUPPSCO) had the following membership at the time of its ballot for approval of this standard:

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M. D. Weber, Secretary

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F. Boorboor ..... United Engineers & Constructors*
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