

# American Nuclear Society

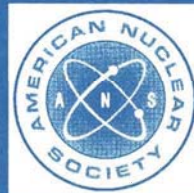
## REAFFIRMED

May 8, 2020  
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## nuclear criticality safety training

## an American National Standard

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for Nuclear Criticality Safety Training**

Secretariat  
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## **American National Standard**

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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 a part of American National Standard for Nuclear Criticality Safety Training, ANSI/ANS-8.20-1991.)

This standard presents the training outline, procedures, and responsibilities for providing appropriate nuclear criticality safety training for employees associated with fissile material operations outside reactors. The usefulness of this standard lies in its provisions for the establishment of training objectives, the designation of personnel requiring training, the skeletal framework of training program content, and criteria for program documentation and evaluation. The two appendixes include relevant references and resources and various methods for conducting training. Heretofore, no generally accepted guidance for nuclear criticality safety training has been available.

This standard was initiated by the Training Work Group of the U.S. Department of Energy Nuclear Criticality Technology and Safety (U.S. DOE NCT&S) Project in recognition of the need for and the feasibility of a standard for the establishment of consistent, appropriate nuclear criticality safety training in fissile material operations outside nuclear reactors.

A group, ANS-8.20, under Subcommittee 8 of the Standards Committee of the American Nuclear Society, was established to formulate the proposed standard. Several drafts were prepared for review by the members of the NCT&S Project Training Work Group. The membership of the Training Work Group was expanded to include representatives from not only the U.S. DOE, its field offices, and its contractors, but also from the U.S. Nuclear Regulatory Commission (U.S. NRC), private nuclear industry companies, and universities.

This standard was developed by ANS-8.20, which had the following membership:

|   |  |
|---|--|
| M. R. Crowell, Chairman, <i>Oak Ridge Associated Universities</i> | C. M. Hopper, <i>Oak Ridge National Laboratory</i>         |
| F. M. Alcorn, <i>Babcock &amp; Wilcox Company</i>                 | N. Ketzlach, <i>The Ralph M. Parsons Company</i>           |
| L. C. Dolan, <i>Martin Marietta Energy Systems, Inc.</i>          | L. L. Lowry, <i>Lawrence Livermore National Laboratory</i> |
| M. C. Evans, <i>British Nuclear Fuels plc</i>                     | T. P. McLaughlin, <i>Los Alamos National Laboratory</i>    |

Invaluable assistance was given in the review process of this standard by R. A. Knief of *GPU Nuclear Corporation*, G. A. Price of *Brookhaven National Laboratory*, and other members of the Training Work Group of the NCT&S Project.

This standard was prepared under the direction of ANS-8, Fissionable Materials Outside Reactors. The membership of ANS-8 at the time of its approval of this standard was as follows:

|   |   |
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| E. B. Johnson, Secretary, <i>Oak Ridge National Laboratory</i>          | N. Ketzlach, <i>The Ralph M. Parsons Company</i>              |
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| E. D. Clayton, <i>Battelle Pacific Northwest Laboratories</i> (retired) | D. A. Reed, <i>Martin Marietta Energy Systems, Inc.</i>       |
| D. M. Dawson, <i>Science Applications International Corporation</i>     | D. R. Smith, <i>Los Alamos National Laboratory</i> (retired)  |
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|   | G. E. Whitesides, <i>Martin Marietta Energy Systems, Inc.</i> |

Consensus Committee N16, Nuclear Criticality Safety, had the following membership at the time of its approval of this standard:

Dixon Callihan, Chairman  
David R. Smith, Vice Chairman  
Elizabeth B. Johnson, Secretary

| <i>Organization</i>   | <i>Representative</i>             |
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| American Institute of Chemical Engineers .....                  | L. Robert LaRiviere               |
| American Nuclear Society .....                                  | Dixon Callihan                    |
| American Society for Testing and Materials (Liaison only) ..... | Ricardo Artigas                   |
| Health Physics Society .....                                    | John W. Cure III                  |
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