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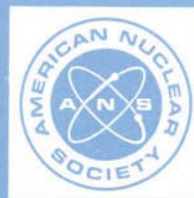
WITHDRAWN

July 28, 2000
ANSI/ANS-56.6-1986

**pressurized water reactor
containment ventilation systems**

an American National Standard

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American Nuclear Society
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Revision of ANSI/ANS-56.6-1978

**American National Standard
for Pressurized Water Reactor Containment
Ventilation Systems**

Secretariat
American Nuclear Society

Prepared by the
**American Nuclear Society
Standards Committee
Working Group ANS-56.6**

Published by the
**American Nuclear Society
555 North Kensington Avenue
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American National Standard

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Foreword

(This Foreword is not a part of American National Standard for Pressurized Water Reactor Containment Ventilation Systems, ANSI/ANS-56.6-1986.)

The need for the development of an industry standard for PWR ventilation systems was recognized by the American Nuclear Society in 1972 and it identified this standard as being one of the high priority system standards.

This standard is a revision to ANSI/ANS-56.6-1978 and has been revised in accordance with NUPPSO policy requiring a five year review of all standards. The major areas of revision include:

1. Reference to and terminology from updated codes and standards.
2. Elimination of the "boxing technique" for identifying nuclear safety-related auditable design criteria.
3. An overall review of the technical adequacy of the standard.
4. An overall review of the justification of requirements and recommendations used throughout the standard.

The objective of this standard is to specify the functional design requirements, for the ventilation systems addressed, in sufficient detail to insure that the systems will perform in a manner that protect the health and safety of the public (including plant personnel) and to enhance the efficient and reliable operation of the facility.

This standard does not address systems designed to perform the following functions:

1. Clean up of the containment airborne radioactivity following a design basis accident.
2. Mixing of combustible gases or venting of combustible gases following a design basis accident. This is addressed in a separate standard. See proposed American National Standard Criteria for the Evaluation of Post Accident Hydrogen Generation and Flammability Control in LWR, ANS-56.1; assigned correspondent: N. Willoughby, 77 Seventh Avenue, New York, NY 10011.
3. Ventilation exhaust from the surface of the refueling canal.
4. Secondary Containment Ventilation Systems.
5. Normal Operating Pressure Relief Systems.

Due to the number of systems covered by this standard and the various functions that each system may provide, it is necessary to cover each system independently except in the areas of pipe whip, missile protection, and fire protection, which are addressed in the following American National Standards: Design Basis for Protection of Light Water Nuclear Power Plants Against Effects of Postulated Pipe Rupture, ANSI/ANS-58.2-1980 and Generic Requirements for Light Water Nuclear Power Plant Fire Protection, ANSI/ANS-59.4-1979; also proposed American National Standard for Plant Design Against Missiles, ANS-58.1; assigned correspondent: W. H. D'Ardenne, General Electric Company, 175 Curtner Ave., MC 682, San Jose, Calif. 95125.

Recirculation filtration systems inside the containment providing nuclear safety functions are not incorporated into nuclear power plants presently under construction. These systems require excessive amounts of iodine adsorbing material requiring frequent testing and replacement due to aging, even without usage. The iodine removal function in the containment following a design basis accident is currently performed primarily by containment spray systems with chemical additives. These systems are addressed in American National Standard for PWR and BWR Containment Spray System Design Criteria, ANSI/ANS-56.5-1979.

Ventilation systems for refueling canals are not addressed by this standard since they tend to create these problems:

- a) increased evaporation of canal water,
- b) visibility problems caused by ripples on the water surfaces,
- c) increased, sometimes excessive, noise levels, and
- d) obstruction of refueling operations from supply and return ducts located at the sides of the canal.

This standard does not preclude the use of such ventilation systems.

Secondary containments are design features required at certain sites to reduce offsite exposures from design basis accidents. The need for a secondary containment and the type of secondary containment ventilation design is dictated to a large extent by site meteorology. For this reason, specific criteria for secondary containment ventilation systems are not included.

This standard was prepared by Working Group ANS-56.6 of the American Nuclear Society, whose membership at the time of its approval was:

M. Asztalos, Chairman, *Westinghouse Electric Corporation*
A. Bocchino, *United Engineers & Constructors*
C. Changelian, *Stone & Webster Engineering Corporation*
R. Mays, *Bechtel Power Corporation*
P. White, *Duke Power Company*

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