

AMERICAN NATIONAL STANDARD
REACTOR PLANTS AND THEIR MAINTENANCE

Cleaning of Fluid Systems and
Associated Components
During Construction Phase of
Nuclear Power Plants

ANSI N45.2.1 - 1973

SECRETARIAT

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS

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This standard was approved by the American National Standards Committee N45 and its Secretariat, and it was subsequently approved and designated N45.2.1-1973 by the American National Standards Institute on February 26, 1973.

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FOREWORD

(This foreword is not a part of American National Standard Cleaning of Fluid Systems and Associated Components during Construction Phase of Nuclear Power Plants).

This standard delineates the requirements for cleaning fluid systems and associated components in a nuclear power plant during its construction phase. The standard was developed under the sponsorship of the American Society of Mechanical Engineers (ASME) as an effort by the American National Standards Institute's (ANSI) committee N45 on Reactor Plants and Their Maintenance. This committee has been chartered to promote the development of standards for the location, design, construction and maintenance of nuclear reactors and plants embodying nuclear reactors, including equipment, methods and components specifically for this purpose.

In May, 1969, the N45 Committee of ANSI established an ad hoc committee (N45-2.1) on Cleaning of Fluid Systems and Associated Components. The purpose of the committee was to prepare a standard for general industry use that would define the cleaning activities for fluid systems and components during the construction phase. The ad hoc committee was composed of representatives of key segments of the nuclear industry including utilities, reactor suppliers, architect-engineers and government sponsored agencies.

The initial draft of this standard was prepared in November, 1969. Since then five revisions have been made to reflect comments received from committee members, other ad hoc committees, selected individuals from the nuclear industry and the United States Atomic Energy Commission.

In April of 1970, the N45 Committee of ANSI established a subcommittee N45-2 to guide the preparation of nuclear quality assurance standards. This subcommittee is responsible for establishing guidelines and policy to govern the scope and content of the various standards; monitoring the status of standards in process; recommending preparation of additional standards; and final approval of standards prior to their submittal to the N45 Committee for balloting. Working with the N45-2.0 Subcommittee and concurrently with the development of this standard by the N45-2.1 ad hoc committee, other ad hoc committees of N45 are developing a series of standards that set forth both general and detailed requirements for certain activities to assure quality of nuclear power plants. These requirements will be coordinated with the requirements of this standard as they are developed.

In September 1971, these ad hoc committees were changed to work groups. In October 1972, the N45-3 Subcommittee was renamed N45-2, and the work groups were renamed accordingly. As of February 1973, the following associated standards were in preparation or issued:

Working Group		Standard in Preparation or Issued
-	N45.2	Quality Assurance Program Requirements for Nuclear Power Plants
N45-2.2	N45.2.2	Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants (During the Construction Phase)
N45-2.3	N45.2.3	Housekeeping During the Construction Phase of Nuclear Power Plants
N45-2.4	N45.2.4	Supplementary Quality Assurance Requirements for Installation, Inspection and Testing of Instrumentation and Electric Equipment During the Construction of Nuclear Power Generating Stations
N45-2.5	N45.2.5	Supplementary Quality Assurance Requirements for Installation and Testing of Structural Concrete and Structural Steel During the Construction Phase for Nuclear Power Plants

N45-2.6	N45.2.6	Qualifications of Inspection, Examination and Testing Personnel for the Construction Phase of Nuclear Power Plants
N45-2.8	N45.2.8	Supplementary Quality Assurance Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems for the Construction Phase of Nuclear Power Plants
N45-2.9	N45.2.9	Requirements for Collection, Storage and Maintenance of Quality Assurance Records
N45-2.10	N45.2.10	Quality Assurance Terms and Definitions
N45-2.11	N45.2.11	Quality Assurance Requirements for the Design of Nuclear Power Plants
N45-2.12	N45.2.12	Quality Assurance Program Auditing Requirements for Nuclear Power Plants
N45-2.13	N45.2.13	Supplementary Quality Assurance Requirements for Preparation of Procurement Documents for Nuclear Power Plants
N45-2.4	N45.2.14	Supplementary Quality Assurance Requirements During the Manufacture of Class 1E Instrumentation and Electric Equipment for Nuclear Power Generating Stations

Suggestions for improvement gained in the use of this standard will be welcome. They should be sent to the Secretary, American National Standards Committee N45, The American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, New York 10017.

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*As of October 19, 1971

