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Foreword

(This foreword is not a part of American National Standard Criteria for Technical Specifications for Nuclear Power Stations, ANSI/ANS-58.4-1979.)

Historically, the preparation of technical specifications dealing with the radiological aspects of operating licenses was done on an individual basis for each facility. This ad hoc approach resulted in the issuance of specifications that addressed the broad categories required by Title 10, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," Section 50.36, but lacked overall consistency of technical content. As the number of operating plants increased, this inconsistency between specifications resulted in: an increasing diversity of opinion among applicants as to what should properly be included as technical specifications; protracted negotiations between license applicants and the Nuclear Regulatory Commission (NRC) leading to last minute resolution of substantive technical issues; an excessive and untimely expenditure of manpower at a critical phase in the licensing process; misapplication and misinterpretation of requirements by plant operating staffs and NRC inspection personnel; and a proliferation of requests for changes to technical specifications for operating facilities.

In recognition of these difficulties and in an effort to provide a systematic approach to technical specification content, the NRC initiated the Standard Technical Specification Program in the Spring of 1972. The program was an integral part of the overall NRC licensing and standardization effort and had as its principal goal the development and maintenance of uniform and technically consistent generic Standard Technical Specifications (STS) for each Nuclear Steam Supply System (NSSS) product and related balance of plant. These generic STS are currently being used as the basis for issuance of individual facility technical specifications.

The STS documents define in a highly detailed manner those features, characteristics and conditions necessary to ensure that a facility is maintained and operated with adequate protection for the health and safety of the public. Because the STS were developed and intended to be used as working documents, they do not provide direct guidance on the methods and rationale used in their development. Since technical specifications are an important element in the establishment and maintenance of an acceptable level of nuclear safety at each facility, it is essential that a reference framework of guidance for their development and criteria for their content be delineated in order to promote the common understanding of technical specifications throughout the nuclear industry.

Working Group ANS-58.4 of the Standards Committe of the American Nuclear Society was chartered in August of 1975 to develop a standard for technical specifications that would provide criteria for their development consistent with the requirements of 10CFR50.36. This standard, applicable to all nuclear power plants, was developed in accordance with the aims outlined in the scope statement and does not extend to the environmental aspects of technical specifications. In accordance with ANS-50 policy, those criteria that are "nuclear safety related" are indicated by enclosing them in a box.

The Working Group feels strongly that users of this standard should pay particular attention to the guidance contained in Appendices B and C. The early consideration of technical specifications in the development of the design, safety analysis, and operational planning, and the continuing application of operating experience to technical specifications are considered essential if the document is to be meaningful.

This standard employs a technique using a discrimination device called "boxing." This technique indicates those statements which are nuclear safety related. The term "nuclear safety" includes those requirements that are felt by the writing group to arise from official and implied NRC policies (including regulations, regulatory guides,

branch positions, the Standard Review Plan, and past practice on applications) *as well as* other requirements the group believes are related to nuclear safety. Non-nuclear safety related requirements include the following types of needs as they exclusively apply to areas not considered to be nuclear safety related: conventional safety, equipment reliability, plant availability, good engineering practice, and contractual (commercial) requirements.

Working Group ANS-58.4 had the following membership at the time this standard was approved:

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A. B. Spinell, Jr., *Combustion Engineering, Inc.*
R. P. Williamson, *Babcock & Wilcox Company*

The following participated in the activities of the Working Group ANS-58.4:

J. Fray, *General Electric Company*
C. Tyrone, *Mississippi Power & Light Company*
J. White, *Houston Light & Power Company*
J. M. McGough, *U.S. Nuclear Regulatory Commission*
G. P. Wagner, *Commonwealth Edison Company*

Membership of Subcommittee ANS-50, the Power Reactor System Committee, at the time of its approval of this standard was:

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The American National Standards Committee, N18, "Nuclear Design Criteria," had the following membership at the time it reviewed and approved this standard:

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Criteria for Technical Specifications for Nuclear Power Stations

1. Scope

This standard applies to the preparation of technical specifications required by Title 10, Code of Federal Regulations, Part 50, "Licensing of Production Facilities," Section 50.36, "Technical Specifications" [1][1] for all nuclear power plants and provides the following:

(1) A detailed conceptual framework which can be applied to the preparation of technical specifications.

(2) Criteria for selecting subjects and values to be included in the technical specifications.

(3) Criteria for developing technical specification bases.

2. Definitions

2.1 Limitations. The definitions given below are of a restricted nature for the purpose of this standard.

2.2 Glossary of Terms.

acceptable level of safety. The aggregate of an individual facility's conditions found on a case-by-case basis to be adequate to assure protection of the public health and safety considering the probability and consequences of adverse events including the expected response of that facility to those events.

barriers to fission product release. Those major physical barriers that are designed to contain and prevent the uncontrolled release of fission products from anywhere within the reactor coolant pressure boundary or primary coolant boundary, as applicable.

condition restoration time. The maximum time allowed to restore process parameters, setpoints for automatic protection devices, or inoperable equipment to within the specified conditions.

operable. Having the capability of performing the safety function(s) specified for a system or component. Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electric power sources, cooling or seal water, lubrication, or other auxiliary equipment that are essential for the system or component to perform its safety function(s) are also capable of performing their related support functions.

plant process conditions

(1) normal plant process condition. A plant process condition which is expected normally or regularly in the course of planned unit operation.

(2) frequent plant process condition. A plant process condition which could occur at least once per calendar year for a particular unit.

(3) infrequent plant process condition. A plant process condition which could occur at least once during the lifetime of a particular unit.

(4) limiting plant process condition. A plant process condition, which, although not expected to occur in any given unit lifetime, is selected for establishing design bases for systems, structures, and components needed to accomplish a safety function.

primary coolant boundary (PCB). (Applicable to Gas Cooled Reactors Only). The prestressed concrete reactor vessel (PCRV) liner, including all cavity and penetration liners which are exposed to primary coolant, in conjunction with the prestressed concrete structure, forms the primary coolant boundary and includes:

(1) All primary closures that seal penetrations in the PCRV liner.

(2) All system piping within the PCRV liner cavity that contains primary coolant and penetrates the PCRV liner or PCRV closures, up to and including the second isolation valve.

(3) All system piping within the PCRV liner

[1]Numbers in brackets refer to corresponding numbers in Section 6, References.