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urity for nuclear power plants

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Foreword

(This Foreword is not a part of American National Standard Security for Nuclear Power Plants, ANSI/ANS-3.3-1988.)

Security of industrial installations has traditionally been oriented toward protection of a given facility against theft and acts of malicious mischief or vandalism, except where the nature of the work required protective measures against compromise of proprietary information or materials, or safeguarding of information or materials associated with sensitive national defense and security matters. In addition, some industrial activities are of potential hazard to casual intruders and security measures are necessary to protect the owner against liability claims.

Owner organizations may have other strong incentives for protection of nuclear power plants, such as the protection of employees, the large capital investment involved, and the preservation of reliable power sources. Although other incentives are recognized as having significant impact on the preparation of an overall security program, and may derive collateral support from the provisions of this standard, they were not explicitly considered in its preparation.

The intent of the standard is to prescribe measures to prevent an act of sabotage against a nuclear power plant that would result in a release of radioactivity that could impact the health and safety of the public. An act of sabotage that would cause a release that could impact the health and safety of the public is defined as "Radiological Sabotage." A release of radioactivity as a result of radiological sabotage is considered to be that which is comparable to an accident release. The Code of Federal Regulations in Title 10, Part 100 lists dose limits for accident conditions. To produce doses approaching those specified in 10 CFR 100, an act of radiological sabotage would have to produce damage to the reactor core or to spent fuel that had not experienced long term decay. Radiological sabotage, as used in this standard, is sabotage that will result in damage to the reactor core or to spent fuel which has experienced only short term decay. Actions against the facility that will not produce this effect are considered to be acts of vandalism and not acts of radiological sabotage.

The safety measures employed to avoid the creation of hazards to offsite members of the public in potentially hazardous industries, such as certain chemical manufacturing and the nuclear power industry, have not normally been considered to be directly associated with industrial security programs. However, recent trends of violence and coercion by certain subcultures of modern society have served to emphasize the close relationship between the health and safety considerations for the offsite public and the need for augmented industrial security measures.

To provide the public with protection against an act of radiological sabotage the standard requires that as the sources of increased threat to their health are approached the degree of security is increased. Increasing levels of control are required as one enters the Owner Controlled Area, the Protected Area, and the Vital Area respectively.

At the time of the revision to the standard the U.S. Nuclear Regulatory Commission (NRC) was in the process of determining whether an industry guideline proposed by the Nuclear Utility Management and Resource Council (NUMARC) for a nuclear power plant access authorization program would be endorsed by the NRC. Due to this decision not being made at the time of this revision, Subsection 5.4.5.1, "Screening" of the 1982 standard is retained in this revision. Should the NUMARC Guidelines be accepted by the NRC it is intended that these Guidelines will replace Subsection 5.4.5.1 of this standard.

It is very important that the needs of security receive equal consideration as that for

operation and maintenance in the design stage of a nuclear power plant. If security requirements are not properly coordinated during the design stage, interferences could result that will be difficult to cope with after the design is fixed. Consideration of access control for personnel, vehicles and material is essential. The fire protection program and the emergency plan requirements must also be considered in designing for security.

Definitions in the Code of Federal Regulations, Title 10, Part 73, cover facilities licensed for processing and transportation of special nuclear material as well as nuclear power plants. The definitions herein might vary from definitions in the Federal Regulations for clarity purpose or to relate them only to a nuclear power plant.

This standard does not specify the quality assurance requirements for the electrical systems and components of security equipment.

The criteria provided in this standard are intended to be generally consistent with applicable Federal Regulations. This standard is a revision of the 1982 approved American National Standard and reflects the changes as described in revisions to the Code of Federal Regulations, Title 10, Part 73, since 1982.

This standard was prepared by a working group formed under the direction of Subcommittee ANS-3, Reactor Operations and Support Activities. Membership of the working group was:

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