



Standard Practice for Quality Assurance for Protective Coatings Applied to Nuclear Facilities¹

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1. Scope

1.1 This practice provides a common basis for, and specifically comprises quality assurance requirements applicable to, safety-related protective coating work in Coating Service Level I areas of nuclear facilities as defined in Guide D 5144.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

D 4227 Practice for Qualification of Coating Applicators for Application of Coatings to Concrete Surfaces²

D 4228 Practice for Qualification of Coating Applicators for Application of Coatings to Steel Surfaces²

D 4537 Guide for Establishing Procedures to Qualify and Certify Inspection Personnel for Coating Work in Nuclear Facilities²

D 5144 Guide for Use of Protective Coating Standards in Nuclear Power Plants²

2.2 ANSI Standards:

N45.2 Quality Assurance Program Requirements for Nuclear Power Plants³

NQA-1 (86) Quality Assurance Program Requirements for Nuclear Facilities³

2.3 ASME Standard:

NQA-1 (89) Quality Assurance Program Requirements for Nuclear Facilities⁴

2.4 Code of Federal Regulations:⁵

10 CFR 50, Appendix B: Title 10, Chapter 1, Energy, Part 50, Domestic Licensing of Production and Utilization

Facilities, Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants
10 CFR 21 Reporting of Defects and Noncompliances

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *certification*—the written documentation of the qualification of personnel or material.

3.1.2 *coating applicator*—an organization or individual responsible for applying a protective or decorative coating system.

3.1.3 *coating manufacturer*—an organization responsible for manufacturing coating materials.

3.1.4 *coating system*—a polymeric protective film consisting of one or more coats, applied in a predetermined order by prescribed methods.

3.1.5 *coating work*—an all-inclusive term to define all operations required to accomplish a complete coating job. The term shall be construed to include materials, equipment, labor, preparation of surfaces, control of ambient conditions, application and repair of coating systems, and inspection.

3.1.6 *Code of Federal Regulations (CFR)*—the rules and regulations of the United States Federal Government. The code is subdivided into titles, with Title 10 (10 CFR) applying to energy.

3.1.7 *paintings/coatings/linings*—essentially synonymous terms for liquid-applied materials consisting of pigments and fillers bound in a resin matrix, which dry or cure to form a thin, continuous protective or decorative film. “Linings” indicate an immersion environment.

3.1.8 *deviation*—a departure of a characteristic from established procedures or from specified requirements.

3.1.9 *documentation*—any written or pictorial information describing, defining, specifying, reporting, or certifying activities, requirements, procedures, or results.

3.1.10 *inspection*—a phase of quality control which by means of examination, observation, or measurement determines the conformance of materials, supplies, components, parts, appurtenances, systems, processes, or structures to predetermined quality requirements.

3.1.11 *inspection agency*—a person or persons authorized by the owner or owner’s designee to verify and attest conformance of the coating work.

3.1.12 *nonconformance*—a deficiency in characteristic,

¹ This practice is under the jurisdiction of ASTM Committee D33 on Protective Coating and Lining Work for Power Generation Facilities and is the direct responsibility of D33.03 on Quality Systems.

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² *Annual Book of ASTM Standards*, Vol 06.02.

³ Available from American National Standards Institute, 13th Floor, 11 W. 42nd St., New York, NY 10036.

⁴ Available from the American Society of Mechanical Engineers, 345 E. 47th St., NY 10017.

⁵ Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.