



NRC Regulatory Guide 1.26, Revision 6

Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste- Containing Components of Nuclear Power Plants

NRC Staff

ACRS Presentation

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Reason for Revision

- Revision 5 to RG 1.26 was an administrative update
- Proposed Revision 5 presented to ACRS in October 2016
- ACRS letter dated 10-17-2016 stated:
 - Revision 5 to RG 1.26 should be issued
 - Next revision to RG 1.26 should be broadened to include basic principles for assignment of components to each quality group
- EDO responded on 12-13-2016 that Revision 5 to RG 1.26 would be issued, and next revision to RG 1.26 would address ACRS recommendations
- NRC issued proposed Revision 6 to RG 1.26 (DG-1371) for public comment in April 2021



Key Changes

- New Appendix A, “Alternative Classification for Components in Light-Water-Cooled Nuclear Power Plants,” discusses component classification method described in American National Standards Institute (ANSI)/American Nuclear Society (ANS) Standard 58.14-2011, “Safety and Pressure Integrity Classification Criteria for Light Water Reactors.”
- Updated NRC staff position on classification of Quality Group C components to reflect latest guidance on systems that contain radioactive material.
- NRC staff improved proposed Revision 6 to RG 1.26 in response to public comments.



Appendix A to Revision 6 to RG 1.26

- Applicant or licensee may propose use of the classification method in ANSI/ANS-58.14-2011 subject to considerations discussed in RG 1.26, Appendix A
- ANSI/ANS-58.14 scope is broader than RG 1.26 to apply to pressure integrity for water, steam, or radioactive material components
- ANSI/ANS-58.14 does not include radiological criteria in RG 1.26 to complement application of ANSI/ANS-58.14 with RG 1.26
- Based on terminology differences, ANSI/ANS-58.14 users should consider full scope of 10 CFR Part 50, Appendix A



Appendix A to Revision 6 to RG 1.26 (continued)

- Specific guidance provided for ANSI/ANS-58.14 users in developing Class 1 to 4 (Quality Group A to D)
- User should apply applicable *ASME Boiler and Pressure Vessel Code*, Section III, Subsection NF, for snubbers
- ANSI/ANS-58.14 users should review plant-specific design in comparison to RG 1.26 because specific RG 1.26 topics (such as spent fuel pool) not addressed in ANSI/ANS-58.14
- Users should ensure that containment penetration regulations are met
- Applicable users may include 10 CFR 50.69 (risk-informed categorization and treatment) as part of classification



Quality Group C

Modification in RG 1.26

- Systems, other than radioactive waste management systems, not covered by Regulatory Positions 2.a through 2.c that contain or may contain radioactive material and whose postulated failure would result in conservatively calculated potential offsite doses that exceed 0.1 rem total effective dose equivalent; only single component failures need be assumed for those systems located in Seismic Category I structures, and no credit should be taken for automatic isolation from other components in the system or for treatment of released material, unless the isolation or treatment capability is designed to the appropriate seismic and quality group standards and can withstand loss of offsite power and a single failure of an active component.



Response to Public Comments

- Comment: Include 10 CFR 50.54 and 10 CFR 50.55 in list of regulatory requirements.
 - Response: Complete
- Comment: Clarify applicability of ANSI/ANS-58.14 and 10 CFR 50.69
 - Response: Added detailed footnote to Table 1 in RG 1.26 discussing 10 CFR 50.69



Response to Public Comments

(continued)

- Comment: Add technical basis for including “important to safety” items in Quality Group C or delete
 - Response: Explained ANSI/ANS-58.14 provides consensus recommendation for Class 3 components (Quality Group C) and that applicants/licensees may propose a different classification method for those components
- Comment: Term “important to safety” is ambiguous
 - Response: NRC staff does not consider a safety need to develop a specific definition of “important to safety” at this time



NRC Response to Public Comments

(continued)

- Comment: Explain change to threshold for classification of systems containing radioactive material as Quality Group C
 - Response: RG 1.26 updated to clarify reason for change to threshold for classification of systems containing radioactive material
- Comment: Appendix A to RG 1.26 contains information that should be included in RG 1.201
 - Response: RG 1.26, Appendix A, revised to clarify reference to RG 1.201 with consideration of future improvements to RG 1.201
- Comment: Specific editorial suggestions
 - Response: Complete



High Temperature Reactor Quality Group Classification

- Proposed Revision 2 to RG 1.87, Acceptability of ASME Code, Section III, Division 5, “High Temperature Reactors,” (DG-1380) issued for public comment in August 2021.
- Appendix A, “High Temperature Reactor Quality Group Classification,” in DG-1380 establishes quality group assignments for mechanical systems and components for non-light-water reactors.
- DG-1380 discussed with ACRS on July 20, 2021.
- RG 1.26 relies on DG-1380 for high-temperature reactor quality group classification.



Next Steps

- NRC staff has distributed proposed Revision 6 to RG 1.26 for NRC management review
- NRC staff will address NRC management and ACRS recommendations when finalizing Revision 6 to RG 1.26
- NRC plans to issue Revision 6 to RG 1.26 by early 2022



QUESTIONS?