

REGULATORY ANALYSIS

REGULATORY GUIDE RG 1.140, REVISION 3 DESIGN, INSPECTION, AND TESTING CRITERIA FOR AIR FILTRATION AND ADSORPTION UNITS OF NORMAL ATMOSPHERE CLEANUP SYSTEMS IN LIGHT-WATER-COOLED NUCLEAR POWER PLANTS (Draft Regulatory Guide DG-1280, dated June 2012)

Statement of the Problem

The referenced industry standards provide comprehensive test and inspection requirements, and were revised since the NRC issued Revision 2 of RG 1.140 in June 2001. The American Society of Mechanical Engineers (ASME) Committee on Nuclear Air and Gas Treatment (CONAGT) revised and expanded the scope of equipment covered by ASME-AG-1, “Code on Nuclear Air and Gas Treatment,” which the staff previously endorsed in RG 1.140. The revision to ASME-AG-1b consolidated some requirements from ASME-N509, “Nuclear Power Plant Air Cleaning Units and Components”; ASME-N510, “Testing of Nuclear Air-Treatment Systems”; and other documents previously endorsed by the staff in RG 1.140. In addition, CONAGT developed and published a new standard, ASME N511-2007, “Inservice Testing of Nuclear Air Treatment, Heating Ventilation and Air Conditioning Systems.”

Therefore, revision of this regulatory guidance is necessary to address these changes to the referenced industry standards.

Objective

The objective of this regulatory action is to provide more current guidance that addresses the latest industry standards on nuclear air and gas treatment for normal atmosphere filter systems.

Alternative Approaches

The NRC staff considered the following alternative approaches:

1. Do not revise Regulatory Guide 1.140
2. Withdraw Regulatory Guide 1.140
3. Revise Regulatory Guide 1.140 to address the current methods and procedures.

Alternative 1: Do Not Revise Regulatory Guide 1.140

Under this alternative, the NRC would not revise guidance, and the current guidance would be retained. If NRC does not take action, there would not be any changes in costs or benefit to the public, licensees or the NRC. However, the “no-action” alternative would not address the latest editions of the previously endorsed codes and standards. The NRC would continue to review each application that uses newer edition codes and standards not endorsed by RG 1.140 revision 2 on a case-by-case basis. This alternative maintains the same baseline condition from which other alternatives would be assessed.

Alternative 2: Withdraw Regulatory Guide 1.140

Under this alternative the NRC would withdraw this regulatory guide. This would eliminate the problems identified above regarding the regulatory guide. It would also eliminate the only readily available description of the methods the NRC staff considers acceptable for demonstrating compliance with 10 CFR 50.34a and 50.36a. Although this alternative would be less costly than the proposed alternative, it would impede the public's accessibility to the most current regulatory guidance.

Alternative 3: Revise Regulatory Guide 1.140

Under this alternative, the NRC would revise RG 1.140, taking into consideration the newer codes and standards. This revision would incorporate the new and expanded guidance including: The CONAGT revised and expanded the scope of equipment covered by ASME-AG-1, which the staff previously endorsed in RG 1.140. The revision to ASME-AG-1b consolidated some requirements from ASME-N509, ASME-N510, and other documents previously endorsed by the staff in RG 1.140. In addition, CONAGT has developed and published a new standard, ASME N511-2007.

The impact to the NRC would be the costs associated with preparing and issuing the revised RG. The impact to the public would be the voluntary costs associated with reviewing and providing comments to NRC during the public comment period. The value to NRC staff and its applicants would be the benefits associated with enhanced efficiency and effectiveness in using a common guidance document as the technical basis for license applications and other interactions between the NRC and its regulated entities.

Conclusion

Based on this regulatory analysis, the NRC staff concludes that revision of RG 1.140 is warranted. The staff concludes that the proposed action will enhance the efficiency of application reviews. It could also lead to cost savings for the industry, especially with regard to applications for standard plant design certifications and combined licenses.