

**NUCLEAR REGULATORY COMMISSION**

**[NRC-2011-0296]**

**Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Post-accident Engineered-Safety-Feature Atmosphere Cleanup Systems in Light-Water-Cooled Nuclear Power Plants**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Regulatory guide; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC or the Commission) is issuing a revision to Regulatory Guide (RG) 1.52, "Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Post-accident Engineered-Safety-Feature Atmosphere Cleanup Systems in Light-Water-Cooled Nuclear Power Plants." This guide applies to the design, inspection, and testing of air filtration and iodine adsorption units of engineered-safety-feature (ESF) atmosphere cleanup systems in light-water-cooled nuclear power plants.

**ADDRESSES:** Please refer to Docket ID **NRC-2011-0296** when contacting the NRC about the availability of information regarding this document. You may access information related to this document, which the NRC possesses and are publicly available, using any of the following methods:

- **Federal Rulemaking Web site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2011-0296**. Address questions about NRC dockets to Carol Gallagher; telephone: 301-492-3668; e-mail: [Carol.Gallagher@nrc.gov](mailto:Carol.Gallagher@nrc.gov).

- **NRC's Agencywide Documents Access and Management System (ADAMS):**  
You may access publicly available documents online in the NRC Library at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[ADAMS Public Documents](#)" and then select "[Begin Web-based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). The ADAMS accession number for each document referenced in this notice (if that document is available in ADAMS) is provided the first time that a document is referenced. Revision 4 of Regulatory Guide 1.52 is available in ADAMS under Accession No. ML12159A013. The regulatory analysis may be found in ADAMS under Accession No. ML12159A538.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

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**FOR FURTHER INFORMATION CONTACT:** Mekonnen Bayssie, Regulatory Guide Development Branch, Division of Engineering, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-251-7489; e-mail: [Mekonnen.Bayssie@nrc.gov](mailto:Mekonnen.Bayssie@nrc.gov).

## **SUPPLEMENTARY INFORMATION:**

### **I. Introduction**

The NRC is issuing a revision to an existing guide in the NRC's "Regulatory Guide" series. This series was developed to describe and make available to the public information such as methods that are acceptable to the NRC staff for implementing specific parts of the agency's regulations, techniques that the staff uses in evaluating specific problems or postulated accidents, and data that the staff needs in its review of applications for permits and licenses.

Revision 4 of RG 1.52 was issued with a temporary identification as Draft Regulatory Guide, DG-1274. This guide provides a method that the NRC considers acceptable to implement part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Domestic Licensing of Production and Utilization Facilities," Appendix A, "General Design Criteria for Nuclear Power Plants," as it applies to the design, inspection, and testing of air filtration and iodine adsorption units of ESF atmosphere cleanup systems in light-water-cooled nuclear power plants. For the purposes of this guide, ESF atmosphere cleanup systems are those systems that are credited in the licensee's current design-basis accident (DBA) analysis, as described in the safety analysis report (SAR), or those systems that the licensee has described in the SAR as ESF atmosphere cleanup systems. This guide addresses ESF atmosphere cleanup systems, including the various components and ductwork, in the postulated DBA environment.

The NRC published the previous Revision 3 of this RG in June 2001. Since this publication, the American Society of Mechanical Engineers (ASME) Committee on Nuclear Air and Gas Treatment (CONAGT) has expanded the scope of equipment covered by ASME AG-1, "Code on Nuclear Air and Gas Treatment." The NRC staff had previously endorsed earlier revisions of ASME-AG-1 in RG 1.52. The revision to ASME-AG-1 consolidated select

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 NRC staff in RG 1.52. In addition, CONAGT has developed and published a new standard, ASME-N511-2007, “Inservice Testing of Nuclear Air Treatment, Heating Ventilation and Air Conditioning Systems.” This new standard provides comprehensive test and inspection requirements and is written to complement the expanded ASME-AG-1. Revision 4 of this RG is necessary to address these changes to the referenced industry standards.

## **II. Further Information**

DG-1274 was published in the *Federal Register* on December 30, 2011 (76 FR 82323), for a 60-day public comment period. The public comment period closed on February 25, 2012. Public comments on DG-1274 and the staff responses to the public comments are available under ADAMS Accession No. ML12159A049.

## **III. Backfitting and Issue Finality**

Issuance of this final regulatory guide does not constitute backfitting as defined in 10 CFR 50.109 (the Backfit Rule) and is not otherwise inconsistent with the issue finality provisions in 10 CFR Part 52. As discussed in the “Implementation” section of this regulatory guide, the NRC has no current intention to impose this regulatory guide on holders of current operating licenses or combined licenses.

This regulatory guide may be applied to applications for operating licenses and combined licenses docketed by the NRC as of the date of issuance of the final regulatory guide, as well as future applications for operating licenses and combined licenses submitted after the issuance of the regulatory guide. Such action does not constitute backfitting as defined in 10 CFR 50.109(a)(1) and is not otherwise inconsistent with the applicable issue finality provision in

10 CFR Part 52, inasmuch as such applicants or potential applicants are not within the scope of entities protected by the Backfit Rule or the relevant issue finality provisions in Part 52.

Dated at Rockville, Maryland, this 26<sup>th</sup> day of Sept., 2012.

For the Nuclear Regulatory Commission.

**/RA/**

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