



[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[NRC-2016-0268]

Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation

AGENCY: Nuclear Regulatory Commission.

ACTION: Regulatory guide; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing Revision 2 to Regulatory Guide (RG) 3.54, "Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation." Revision 2 provides methods acceptable to the Nuclear Regulatory Commission (NRC) staff for calculating spent nuclear fuel heat generation rates for use for an Independent Spent Fuel Storage Installation (ISFSI). The revision presents an up-to-date methodology for determining heat generation rates and provides greater flexibility (less restrictions). It also allows loading of higher burnup fuel by using more accurate methods for decay heat calculations.

DATES: Revision 2 to RG 3.54 is available on [INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: Please refer to Docket ID NRC-2016-0268 when contacting the NRC about the availability of information regarding this document. You may obtain publically-available information related to this document, using the following methods:

- **Federal rulemaking Web site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2016-0268. Address questions about NRC dockets to Krupskaya Castellon; telephone: 301-287-9221; e-mail: Krupskaya.Castellon@nrc.gov. For technical questions, contact the individuals listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System**

(ADAMS): You may obtain publicly-available documents online in the ADAMS Public Document collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, 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. 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 2 to Regulatory Guide 3.54 and the regulatory analysis may be found in ADAMS under Accession No. ML18228A808 and ML16139A219 respectively.

- **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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SUPPLEMENTARY INFORMATION:

I. Discussion

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 regarding methods that are acceptable to the NRC staff for implementing specific parts of the agency's regulations, techniques that the NRC staff uses in evaluating specific issues or postulated events, and data that the NRC staff needs in its review of applications for permits and licenses.

Revision 2 of RG 3.54 was issued with a temporary identification of Draft Regulatory Guide, DG-3050, to provide methods that are acceptable to the NRC staff for calculating spent nuclear fuel heat generation rates for use as design input for an independent spent fuel storage installation (ISFSI).

This revision also presents an up-to-date methodology for determining heat generation rates for both pressurized-water reactor (PWR) and boiling-water reactor (BWR) fuel and provides greater flexibility (fewer restrictions) than previous versions of this guide. It allows the loading of higher burnup fuel by using more accurate methods for decay heat calculations by covering a wider range of fuel characteristics, including operating history.

II. Additional Information

The NRC published a notice of the availability of DG-3050 in the *Federal Register* on December 23, 2016 (81 FR 94431), for a 60 day public comment period. The public comment period closed on February 21, 2017. Public comments on DG-3050 and the staff responses to the public comments are available under ADAMS under Accession No. ML18228A811.

III. Congressional Review Act

This RG is a rule as defined in the Congressional Review Act (5 U.S.C. 801-808).

However, the Office of Management and Budget has not found it to be a major rule as defined in the Congressional Review Act.

IV. Backfitting and Issue Finality

This RG will provide guidance to applicants and licensees subject to Title 10 of the *Code of Federal Regulations* (CFR) Part 72, including applicants and holders of Certificates of Compliance (CoC), with respect to determining heat generation rates for spent fuel. Issuance of this RG will not constitute backfitting as defined in 10 CFR 72.62(a), which is applicable to ISFSIs. Issuance of the RG will not constitute backfitting under 10 CFR 50.109, or otherwise be inconsistent with the issue finality provisions in 10 CFR part 52. The staff's position is based upon the following considerations.

1. The RG positions describe a methodology acceptable to the NRC staff, and expressly states that current licensees may continue to use guidance the NRC found acceptable for complying with the identified regulations as long as the licensee does not initiate, as a voluntary matter, a change to its current licensing basis. Thus, the guidance will not constitute backfitting as defined in 10 CFR 72.62(a).
2. The NRC has no intention of imposing the positions in the RG on existing CoCs, ISFSI or nuclear power plant licenses either now or in the future (absent a voluntary request for change from the licensee).
3. The matters addressed in the RG apply equally to both specific licensees under Part 72 as well as general licensees under who hold ISFSI licensees by virtue of their status as holders of Part 50 operating licenses or as holders of Part 52 combined licenses.
4. Backfitting and issue finality do not—with limited exceptions not applicable here—protect current or future applicants. Applicants and potential applicants are not, with certain exceptions, protected by the backfitting

provisions in 10 CFR 72.62. This is because the backfitting provisions in Part 72 were not intended to apply to every NRC action which substantially changes the expectations of current and future applicants.

Dated at Rockville, Maryland, this 19th day of December, 2018.

For the Nuclear Regulatory Commission.

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