[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[NRC-2020-0051]

Environmental Considerations Associated with Micro-Reactors

AGENCY: Nuclear Regulatory Commission.

ACTION: Interim staff guidance; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing Interim Staff Guidance (ISG), "Micro-Reactor License Application COL-ISG-029, 'Environmental Considerations Associated with Micro-Reactors.'" The purpose of this ISG is to modify existing guidance and provide supplemental guidance to assist the NRC staff in determining the scope and scale of environmental reviews of micro-reactor applications.

DATES: This guidance is effective on November 27, 2020.

ADDRESSES: Please refer to Docket ID **NRC-2020-0051** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Web Site:** Go to https://www.regulations.gov and search for Docket ID **NRC-2020-0051**. Address questions about Docket IDs in Regulations.gov to Jennifer Borges; telephone: 301-287-9127; e-mail: Jennifer.Borges@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 Documents collection at https://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 documents entitled, "Micro-Reactor License Application COL-ISG-029, 'Environmental Considerations Associated with Micro-Reactors,'" and "Resolution of Public Comments on Draft COL-ISG-029," are available in ADAMS Package Accession No. ML20252A075.

- **Attention**: The PDR, where you may examine and order copies of public documents is currently closed. You may submit your request to the PDR via e-mail at PDR.Resource@nrc.gov or call 1-800-397-4209 between 8:00 a.m. and 4:00 p.m. (EST), Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Jack Cushing, Office of Nuclear Material Safety and Safeguards, telephone: 301-415-1424, e-mail: Jack.Cushing@nrc.gov and Mallecia Sutton, Office of Nuclear Reactor Regulation, telephone: 301-415-0673, e-mail: Mallecia.Sutton@nrc.gov. Both are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

SUPPLEMENTARY INFORMATION:

I. Background

On February 26, 2020 the U.S. Nuclear Regulatory Commission (NRC) issued a *Federal Register* notice (85 FR 11127) soliciting public comment on its draft Interim Staff Guidance (ISG), "Micro-Reactor License Application COL-ISG-029, 'Environmental Considerations Associated with Micro-Reactors.'" The NRC responded to the comments and revised the draft ISG as appropriate and is issuing it as a final ISG. The NRC staff is preparing for the environmental reviews of prospective design, license, and permit applications for advanced nuclear power reactors (advanced reactors), including micro-reactors. The guidance in the ISG highlights unique considerations for micro-reactors in each resource area typically covered in the staff's environmental review. The ISG also offers guidance on identifying considerations and approaches to simplify and shorten the

environmental reviews for micro-reactors relative to the environmental reviews that the NRC has previously performed for other nuclear facilities, such as large light-water reactors (LWRs). The ISG outlines what the NRC staff considers to be an appropriate scope and level of detail for the specific aspects of an environmental review needed for a micro-reactor licensing action. A micro-reactor may have some, but not necessarily all, of the following characteristics:

- Occupies only a small area of land and/or disturbs only previously disturbed lands.
- Uses zero or only small quantities of resources, such as water or fuel.
- Releases zero or only small quantities of emissions to the environment.
- Avoids environmentally sensitive areas such as wetlands and floodplains.
- Avoids areas with cultural, historic, or environmental justice significance.
- Avoids habitat for threatened or endangered species.
- Uses mitigation to reduce impacts.
- Involves only low levels of employment for both construction and operation.
- Uses simpler designs than those for large LWRs, with limited interfaces with the exterior environment.

While the ISG is designed to aid the NRC staff in developing a micro-reactor environmental impact statement, the staff recognizes the value of the guidance as a supplemental source of insight into the NRC's environmental review process that can inform the development of an applicant's environmental report. Applicants should scale their level of effort appropriately when preparing Environmental Reports, commensurate with the significance of the impact on the resource area being addressed.

The scope of this ISG is limited to environmental review considerations specific to micro-reactors, such as the following:

- preapplication interactions
- purpose and need for the proposed project
- size of the proposed project and resources used
- mitigation
- land use
- water resources
- terrestrial ecology
- aquatic ecology
- socioeconomics and environmental justice

- historic and cultural resources
- need for power and alternatives
- meteorology and air quality
- nonradiological health
- radiological health
- postulated accidents
- severe accident mitigation alternatives
- acts of terrorism
- fuel cycle impacts, transportation of fuel and waste, and continued storage of spent fuel
- cumulative impact analysis
- consistency with safety licensing documents
- incorporation by reference

The NRC staff will continue to look for other opportunities to effectively streamline environmental reviews and work with prospective applicants to identify opportunities to streamline ERs while still meeting the NRC's regulations.

II. Backfitting, Issue Finality, and Forward Fitting Discussion

The guidance in this final ISG-029 clarifies how the NRC will approach environmental reviews for a micro-reactor application for combined license, early site permit, construction permit, operating license and/or limited work authorization. Issuance of this final ISG would not constitute backfitting as defined in section 50.109 of title 10 of the *Code of Federal Regulations* (10 CFR) (the Backfit Rule) and as described in NRC Management Directive 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests;" would not affect the issue finality of an approval under 10 CFR part 52; and would not constitute forward fitting as that term is defined and described in Management Directive 8.4. The staff's position is based upon the following considerations:

1. The final ISG positions, would not constitute backfitting or forward fitting or affect issue finality, inasmuch as the ISG would be internal guidance to NRC staff.

The ISG provides interim guidance to the staff on how to review an application for NRC regulatory approval in the form of licensing. Changes in internal staff guidance,

without further NRC action, are not matters that meet the definition of backfitting or forward fitting or affect the issue finality of a part 52 approval.

2. Current or future applicants are not, with limited exceptions not applicable here, within the scope of the backfitting and issue finality regulations and forward fitting policy.

Applicants are not, with certain exceptions, covered by either the Backfit Rule or any issue finality provisions under 10 CFR part 52. This is because neither the Backfit Rule nor the issue finality provisions under 10 CFR part 52—with certain exclusions discussed below—were intended to apply to every NRC action which substantially changes the expectations of current and future applicants.

The exceptions to the general principle are applicable whenever an applicant references a 10 CFR part 52 license (e.g., an early site permit) and/or NRC regulatory approval (e.g., a design certification rule) with specified issue finality provisions or a construction permit under 10 CFR part 50. The staff does not, at this time, intend to impose the positions represented in the ISG section (if finalized) in a manner that would constitute backfitting or affect the issue finality of a part 52 approval. If, in the future, the staff seeks to impose a position in a manner that constitutes backfitting or does not provide issue finality as described in the applicable issue finality provision, then the staff would need to address the Backfit Rule or the criteria for avoiding issue finality as described in the applicable issue finality provision.

The Commission's forward fitting policy generally does not apply when an applicant files an initial licensing action for a new facility. Nevertheless, the staff does not, at this time, intend to impose the positions represented in the final ISG section in a manner that would constitute forward fitting.

III. Congressional Review Act

This interim staff guidance 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.

Dated: October 23, 2020.

For the Nuclear Regulatory Commission.

/RA/

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