This document is scheduled to be published in the Federal Register on 2026-11-23 and available online at https://www.federalregister.gov/d/2026-23754, and on https://govinfo.gov

[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[Docket No. 70-07045; NRC-2026-4951]

Radiant Industries, Inc.;

Special Nuclear Materials License Application for a Fuel Packing Facility;

Environmental Assessment and Finding of No Significant Impact

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing a finding of no significant impact (FONSI) and accompanying environmental assessment (EA) regarding the NRC's consideration of a license application from Radiant Industries, Inc. (Radiant). Radiant is requesting a special nuclear material license for a facility in Oak Ridge, Tennessee. If granted, the license would allow Radiant to receive tri-structural isotropic (TRISO) particle fuel for fueling the Kaleidos self-contained, 1-megawatt electric reactors. This phase of the planned operational activities would only include packaging TRISO compacts into monoliths. Based on the EA, the NRC staff has concluded that there will be no significant impacts to environmental resources from the requested license, and therefore, a FONSI is appropriate.

DATES: The EA and FONSI referenced in this document are available on **[INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: Please refer to Docket ID NRC-2026-4951 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 Website:** Go to https://www.regulations.gov and search for Docket ID NRC-2026-4951. Address questions about Docket IDs in Regulations.gov to Bridget Curran; telephone: 301-415-1003; email:

Bridget.Curran@nrc.gov. For technical questions, contact the individual 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 ADAMS Public Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, at 301-415-4737, or by email to PDR.Resource@nrc.gov. For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the "Availability of Documents" section of this document.
- **NRC's PDR:** The PDR, where you may examine and order copies of publicly available documents, is open by appointment. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Robert Mocko, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-1631; email: Rob.Mocko@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction

The NRC is considering issuing a special nuclear material license for a facility in Oak Ridge, Tennessee. Radiant is seeking a license under part 70 of title 10 of the *Code of Federal Regulations* (10 CFR), "Domestic Licensing of Special Nuclear Material." The license would allow Radiant to receive TRISO for fueling the Kaleidos self-contained, 1-megawatt electric reactors. As required by 10 CFR part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," the NRC prepared an EA. Based on the results of the EA, the NRC has determined not to prepare

an environmental impact statement (EIS) for the license application and is issuing a FONSI.

A special nuclear material license would allow Radiant to receive, store, and load fresh fuel into fuel monoliths at a designated area of the project site. Site operation for future activities could include fresh fuel storage; reactor fueling, testing, refueling, and staging; and spent fuel storage. However, the proposed licensing action is limited to fresh fuel receipt and storage and loading TRISO compacts into monoliths.

On May 1, 2026, the NRC notified Radiant by letter of its acceptance and docketing of Radiant's application that included an environmental report. The acceptance letter included observations of the application. On June 12, 2026, Radiant responded to the NRC's observations. The NRC staff issued a request for additional information (RAI) for the environmental review on June 24, 2026. Radiant responded to the RAI by letter dated June 29, 2026. Radiant also updated the application's environmental report.

II. Environmental Assessment

Description of the Proposed Action

The NRC's proposed action is the issuance of a special nuclear material license to Radiant for a facility in Oak Ridge, Tennessee. NRC would issue the license under 10 CFR part 70 for the project, locally known as the R-50 Site in the city of Oak Ridge, Roane County, Tennessee. If granted, the license would allow Radiant to receive TRISO fuel for the Kaleidos self-contained 1-megawatt electric reactors. This phase of the planned operational activities is limited to fresh fuel receipt and storage, loading TRISO compacts into monoliths, and staging. Potential later phases may include reactor fueling, testing, and storage prior to deployment to potential customer sites. Additional activities must be licensed separately and may require environmental reviews.

The location for the proposed action was selected by Radiant following an evaluation of several potential domestic locations and a subsequent screening process. The Oak Ridge property selection was based on several factors, which included the

following: engaging with States and municipalities with the regulatory structure and interest in the nuclear industry; favorable site features that would reduce the environmental impacts of the proposed action; favorable site features that would reduce potential risks from accident scenarios due to natural conditions (seismic, flooding, wildfire); utility availability and transportation accessibility; and, availability of employees and community resources to support those employees.

Purpose and Need for the Proposed Action

The purpose of and need for the proposed agency action - issuance of a special nuclear material license - is to allow Radiant to receive TRISO fuel to the project site and then construct and store fuel monoliths that can be used in small modular reactors. Small modular reactors are an excellent source of electric generation for sites that would benefit from a self-contained reactor due to location, lack of supporting infrastructure and the difficulty of developing conventional electrical generation. Radiant's goal is to develop the site and obtain additional authority, through licensing requests, to mass-produce self-contained nuclear reactors for electrical generation using its own Kaleidos technology. There is a strong demand for small modular reactor technology at remote locations such as Arctic communities, defense installations and remote mining operations. This technology would provide those communities with dependable and sustainable power.

Environmental Impacts of the Proposed Action

The NRC staff considered the potential impacts of the proposed action on land use; visual and scenic resources; climatology, meteorology, and air quality; noise; geology and soils; water resources; ecological resources; historic and cultural resources; socioeconomics; public and occupational health; transportation; and waste management.

The NRC staff determined that the proposed action would result in limited environmental impacts. Construction activities, including grading, excavation, building construction, and installation of supporting infrastructure, would result in localized and

temporary increases in noise, air emissions, traffic, and soil disturbance. Construction would occur primarily on previously disturbed industrial land, and applicable permitting requirements, erosion and sediment controls, stormwater management measures, and other best management practices would minimize potential impacts. Operational activities would occur primarily within enclosed industrial facilities and would involve receipt, storage, handling, and packaging of fresh TRISO fuel. The NRC staff does not expect these activities to result in significant impacts to land use, visual resources, air quality, noise, geology and soils, or transportation.

The proposed action would not require groundwater withdrawals or direct discharges to surface waters. Potential effects on water resources would primarily involve erosion and sediment transport during construction and would be minimized through implementation of applicable stormwater management and erosion-control measures. Ecological impacts would primarily consist of limited habitat loss, including clearing approximately 0.6 acres of trees, and temporary noise-related disturbance to wildlife. The NRC staff determined that impacts to ecological resources would be small, based on the previously disturbed nature of the site, the limited construction footprint, and avoidance of wetland and riparian areas. The NRC staff also considered Federally protected species and habitats in its environmental review and conducted consultation under Section 7 of the Endangered Species Act.

The NRC staff evaluated potential impacts to historic and cultural resources in coordination with the Tennessee State Historic Preservation Officer (TN SHPO), the National Park Service, the U.S. Department of Energy (DOE), and Federally recognized Indian Tribes. The TN SHPO concurred with the NRC staff’s determination of no adverse effect. The proposed action is also expected to result in limited socioeconomic and transportation effects associated with construction employment, routine facility operations, and the movement of workers and materials. These activities would occur within an established industrial area with existing transportation infrastructure and available regional services.

Potential public and occupational health impacts would be minimized through engineered facility controls, administrative procedures, radiation protection programs, and compliance with applicable Federal, State, and local requirements. The NRC staff separately evaluated radiological impacts and postulated accidents associated with the proposed activities. Waste generated during construction and operation would include conventional construction debris, routine operational waste, and potentially small quantities of radioactive waste associated with fuel handling and maintenance. These materials would be appropriately characterized, managed, and transferred to authorized recycling, treatment, or disposal facilities, as applicable.

Environmental Impacts of the Alternatives to the Proposed Action

As an alternative to the proposed action, the NRC staff considered the “no-action alternative.” Under the no-action alternative, the NRC would not issue a license to Radiant because regulatory requirements have not been met. Consequently, the facility would not be built and production of the fuel monoliths needed for small modular reactors would not be available to the market. Remote industrial activities, small communities, emergency operations and military installations would continue existing operations depending on diesel fuel for electricity. If the project is not built at the R-50 Site, the environment would remain the same.

Agencies and Persons Consulted

The NRC submitted the draft EA to the State Liaison Officer at the Tennessee Department of Radiological Health (Department) for their review and comment on October 1, 2026. The Department responded on October 19, 2026, with no comments. National Historic Preservation Act (NHPA) consultation was conducted pursuant to 36 CFR 800.8(c). The NRC staff initiated consultation with 18 Federally recognized Indian Tribes with potential historic and ancestral ties to the project vicinity: (1) Absentee Shawnee Tribe, (2) Alabama-Coushatta Tribe of Texas, (3) Alabama-Quassarte Tribal Town, (4) Cherokee Nation, (5) Chickasaw Nation, (6) Coushatta Tribe of Louisiana, (7) Delaware Nation, (8) Eastern Band of Cherokee Indians, (9) Eastern Shawnee Tribe of

Oklahoma, (10) Jena Band of Choctaw Indians, (11) Kialegee Tribal Town, (12) Muscogee Nation, (13) Poarch Band of Creek Indians, (14) Seminole Nation of Oklahoma, (15) Seminole Tribe of Florida, (16) Shawnee Tribe, (17) Thlopthlocco Tribal Town, and (18) United Keetoowah Band of Cherokee Indians. These consultations were conducted to make sure the Tribes were afforded an opportunity to identify their concerns, provide advice on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, and, if necessary, participate in the resolution of any adverse effects to such properties. The Muscogee Nation responded with a request for additional information that was subsequently provided by the NRC staff. The Chickasaw Nation responded that the project was located outside their area of interest. The Shawnee Tribe responded that they are not aware of any cultural resources that would be negatively impacted by the project and asked to be updated on the project.

The NRC staff also initiated consultation with the TN SHPO, National Park Service, and DOE, and informed the Advisory Council on Historic Preservation of its intent to use the National Environmental Policy Act process to satisfy NRC's Section 106 responsibilities pursuant to paragraph 800.8(c) of title 36 of the *Code of Federal Regulations* (36 CFR) (all consulting parties were similarly notified). The TN SHPO responded stating that no archaeological resources would be affected and that there would be no adverse effect to the Manhattan Project National Historic Park. The DOE responded stating that they do not need to participate in consultation. The Advisory Council responded reminding the NRC staff of responsibilities pursuant to 36 CFR 800.8(c). The National Park Service responded that they have no comments at this time and requested confirmation that the NRC staff are conducting Tribal consultations.

Subsequently, the NRC staff's determination of no adverse effect and the draft historic and cultural resources section of the EA was made publicly available and available to the TN SHPO, the National Park Service, and 18 Federally recognized

Tribes. Responses were received from the Shawnee Tribe; request to be informed if there is a discovery situation) and the Delaware Nation; declining to participate in consultation). Also, the TN SHPO responded with their concurrence on the NRC staff's finding of no adverse effect.

On August 28, 2026, the NRC staff accessed the U.S. Fish and Wildlife Service (FWS) Information for Planning and Consultation system and obtained a species list for the proposed action area. The review identified Federally listed species and/or other species of conservation concern with the potential to occur within the action area. NRC staff used the Tennessee Determination Key to analyze the impacts to gray bat (*Myotis grisescens*), spotfin chub (*Erimonax monachus*), Virginia spiraea (*Spiraea virginiana*), White fringeless orchid (*Platanthera integrilabia*) and the species-specific determination keys to analyze the impacts to the tricolored bat (*Perimyotis subflavus*) and the Indiana bat (*Myotis sodalis*). Based on the NRC staff's answers and the assistance of the Tennessee determination key, NRC determined that the impacts to all six species would be "Not Likely to Adversely Affect (NLAA)."

For species listed above with a determination of "Not Likely to Adversely Affect (NLAA)," no further action is necessary, unless the FWS contacts the NRC within 30 calendar days to clarify details of the action or request additional information. The 30-day review period ended on September 27, 2026, and the NRC staff received no comments from the FWS.

III. Finding of No Significant Impact

Based on its review of the special nuclear material license request, in accordance with the requirements of 10 CFR part 51, the NRC staff has determined that issuing the requested license would not significantly affect the quality of the human environment. No significant radiological or non-radiological impacts are expected from the proposed action. Therefore, the NRC staff has determined that pursuant to 10 CFR 51.31, "Determinations based on environmental assessment," preparation of an EIS is not required for the proposed action, and pursuant to 10 CFR 51.32, "Finding of no

significant impact," a FONSI is appropriate. In accordance with 10 CFR 51.32(a)(4), this FONSI incorporates the EA set forth in this notice by reference.

IV. Availability of Documents

The documents identified in the following table are available to interested persons through ADAMS.

DOCUMENT DESCRIPTION	ADAMS ACCESSION NO
NRC acceptance of Radiant Application, dated May 1, 2026	ML26111A377
Radiant response to NRC observations, dated June 12, 2026	ML26165A001
Updated Radiant application, environmental report, after RAI's, dated July 1, 2026	ML26181A042
Environmental Report Radiant R-50 Site Oak Ridge, Tennessee, dated August 12, 2026	ML26226A441
Radiant submitted license application, dated February 2026, March 2026, and April 2026	ML26058A374 package, ML26074A001 package ML26085A468
NRC RAI request, dated June 2026	ML26169A217 package
RAI response, dated June 29, 2026	ML26181A047
Final EA, dated November 4, 2026	ML26258A146
FWS species for the proposed action area, dated August 28, 2026	ML26258A127
Determination keys to analyze the impacts to the tricolored bat, dated August 28, 2026	ML26258A125
Determination keys to analyze the impacts to the Indiana bat, dated August 28, 2026	ML26258A128
Determination Key to analyze the impacts to gray bat, spotfin chub, Virginia spiraea, and White fringeless orchid, dated August 28, 2026	ML26258A129
NRC Correspondence with the FWS, dated September 2026	ML26268A126
NRC consultation with the TN SHPO, dated June 2026	ML26132A143 package
Preliminary consultation with the TN SHPO, dated June 4, 2026	ML26159A003
Section 106 National Park Service email correspondence dated June 18, 2026	ML26173A083
Section 106 consultation letter to Tennessee SHPO dated July 16, 2026	ML26190A217
Section 106 consultation letter to National Park Service dated July 16, 2026	ML26190A216
Section 106 consultation letters to 17 Federally recognized tribes dated July 16,	ML26190A060 package

2026	
Section 106 response from Shawnee Tribe dated August 3, 2026	ML26218A016
Section 106 response from Delaware Nation dated August 10, 2026	ML26225A091
Concurrence from the TN SHPO, dated July 17, 2026	ML26202A085
Submittal to the State Liaison Officer at the Tennessee Department of Radiological Health, dated October 1, 2026	ML26280A184
State response (from Liaison Officer at the Tennessee Department of Radiological Health), dated October 19, 2026	ML26293A120
NHPA consultation with 18 Federally recognized Indian Tribes, dated June 2026	ML26132A010 package
Tribal Responses, dated June 8, 2026, June 8, 2026, June 8, 2026, June 12, 2026	ML26160A031, ML26160A058, ML26160A033, ML26168A466

Authority: 42 U.S.C. 2011 *et seq.*

Dated: November 18, 2026.

For the Nuclear Regulatory Commission.

Robert Sun,
Chief,
Environmental Review Materials Branch,
Division of Storage of Fuel, Transportation, and Environmental,
Office of Nuclear Material Safety, and Safeguards.

[FR Doc. 2026-23754 Filed: 11/20/2026 8:45 am; Publication Date: 11/23/2026]