



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 31, 2024

E. Patrick McIntyre, Jr.
Executive Director
and State Historic Preservation Officer
Tennessee Historical Commission
State Historic Preservation Office
2941 Lebanon Pike
Nashville, TN 37214

SUBJECT: REQUEST TO INITIATE SECTION 106 CONSULTATION FOR KAIROS
POWER PROPOSED NON-POWER TEST REACTORS (HERMES 2)
CONSTRUCTION PERMIT REVIEW IN ROANE COUNTY, TENNESSEE
(DOCKET NUMBER: 50-611 AND 50-612)

Dear E. Patrick McIntyre, Jr.:

The U.S. Nuclear Regulatory Commission (NRC) is conducting an environmental review for a construction permit (CP) application submitted by Kairos Power, LLC (Kairos) for two proposed non-power test reactors referred to collectively as Hermes 2. The application was submitted by Kairos in a letter dated July 14, 2023, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50. The Hermes 2 reactors, if licensed, would be constructed on a site within the East Tennessee Technology Park (ETTP) in Oak Ridge, Roane County, Tennessee (see Enclosure). The NRC recently issued Kairos a CP to build the Hermes test reactor (herein referred to as the Hermes 1 reactor) on the same site.

The application is available through the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible at <https://www.nrc.gov/reading-rm/adams.html#web-based-adams>. The environmental report portion of the application is listed under ML23195A125 and is available at <https://www.nrc.gov/docs/ML2319/ML23195A125.pdf>.

As part of the review, the NRC staff is preparing an environmental assessment (EA) under the National Environmental Policy Act (NEPA) of 1969, as amended, to determine whether to prepare an environmental impact statement (EIS) or finding of no significant impact (FONSI). In accordance with 36 CFR 800 "Protection of Historic Properties" Section 800.8(c), the NRC is using the NEPA process to comply with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), in lieu of the procedures set forth in 36 CFR 800.3 through 800.6. The EA will include identification of historic and cultural resources and historic properties, an analysis of potential effects of the proposed action, including potential effects on historic and cultural resources and historic properties as well as the NRC staff's preliminary determination. The purpose of this letter is to initiate NHPA Section 106 consultation.

The proposed Kairos Hermes 2 site is located on a site within the ETTP in the northwest quadrant of the Oak Ridge Reservation, is adjacent to the Clinch River arm of Watts Bar Reservoir in Roane County and is approximately 13 miles west of downtown Oak Ridge Tennessee. It is located across Poplar Creek and west of the Manhattan Project National Historic Park.

The proposed site previously housed Buildings K-31 and K-33, which were part of the K-25 complex and operated as the Oak Ridge Gaseous Diffusion Plant. Uranium enrichment operations at the K-25 site ceased in 1986, and restoration, decontamination, and decommissioning activities began soon thereafter. Reindustrialization of the ETTP began in 1996 by U.S. Department of Energy in cooperation with the Community Reuse Organization of East Tennessee in preparation for conversion of the site to a private sector industrial park, to be called the Heritage Center. The ETTP has been transformed into a multi-use industrial park and conservation area.

As part of completing the NHPA Section 106 process for the adjacent Hermes 1 reactor, an investigation was conducted that also analyzed the location for the Hermes 2 reactors. The results of the investigation, which will be summarized in the EA for Hermes 2, is available to qualified archaeologists and Tribes through the Tennessee Historical Commission using the identification: TN SHPO PROJECT # SHPO0001832.

The NRC has determined that the Area of Potential Effect (APE) for the Hermes 2 CP review includes the area at the Hermes 2 reactor site and its immediate environs where the character and use of historic properties may be directly (i.e., physically) or indirectly (i.e., visually or auditorily) impacted by land-disturbing and building activities associated with the construction and operation of the proposed facility. More specifically, the direct effects APE comprises approximately 185 acres (see Enclosure "Project Site") and indirect effects APE is a 0.5-mile area around the proposed site.

Pursuant to 36 CFR 800.8(c)(1)(iii), the NRC is ensuring that Indian Tribes who might attach religious and cultural significance to historic properties in the APE are afforded the 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 NRC expects to complete the draft EA, and if applicable, a draft FONSI, and issue them for public comment by April 2024. A copy of the draft EA and draft FONSI will be made available for your review and comment. After consideration of public comments, the NRC will determine whether to prepare an environmental impact statement or a final EA and final FONSI.

The NRC invites you to submit any comments or concerns that you may have to offer on the NRC's Section 106 consultation, and historic and cultural resources evaluation within 30 days of receipt of this letter. Comments, questions, and concerns may be submitted to Beau Goldstein, staff archaeologist at 301-415-3835 or via email at Beau.Goldstein@nrc.gov; or the environmental project manager, Peyton Doub, at 301-415-6703 or via email at Peyton.Doub@nrc.gov.

Sincerely,



Signed by Doub, Joseph
on 01/31/24

J. Peyton Doub, Acting Chief
Environmental Project Management Branch 3
Division of Rulemaking, Environmental,
and Financial Support
Office of Nuclear Material Safety
and Safeguards

Docket Nos. 50-611 and 50-612

Enclosure:
As stated

cc:
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Section 106 Review
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Tennessee e106 portal

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Dated: January 31, 2024

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