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Kairos Power, LLC

Comment On: NRC-2021-0193-0003

Notice of Intent To Conduct Scoping Process and Prepare Environmental Impact Statement; Kairos Energy, LLC, Kairos Test Reactor

Document: NRC-2021-0193-DRAFT-0003
Comment on FR Doc # 2022-03537

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General Comment

Re: Docket ID NRC-2021-0193

Attn: Tamsen Dozier, Office of Nuclear Materials Safety and Safeguards, US NRC, Wash, DC 20555-0001

Comments on Scoping Process for EIS Kairos Power, LLC, Kairos Test Reactor

Based on Review of the Environmental Report submitted by Kairos Power, LLC, I would offer the following comments on the EIS Scoping Process

Comment No. 1:

The Proposed Kairos Power, LLC Test Reactor is an essential element of a highly attractive pathway to reduce carbon emissions from electric generation and high-temperature thermal processes. The Hermes Test Reactor is a key step in the process of demonstrating the operation, maintenance, performance, and affordability of the novel technology. Given the numerous reports by the Intergovernmental Panel on Climate Change showing the urgency of addressing carbon emissions, the NRC should accelerate and complete the licensing reviews of the Hermes Test Reactor so as to enable its potential global environmental, safety and affordability benefits to be evaluated and realized as soon as possible. Although the NRC has published a review schedule, the NRC should implement concrete efforts to accelerate the publishing of the draft EIS and safety reviews to facilitate the construction. In support of this, I strongly endorse the full application of item c. "identify and eliminate from study those issues that are peripheral or are not significant or have been covered by prior environmental reviews." Significantly streamlining by the NRC in the preparation of the EIS should be feasible because the site was previously extensively developed for a now decommissioned federal facility, the K-33 Building at the Oak Ridge Gaseous Diffusion Plant. The characterization of the site following decommissioning and demolition of the K-33

Building met the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations of the EPA. The site was released for private development by the Department of Energy.

Comment No. 2:

As a resident of Oak Ridge, whose residence is approximately 4 miles from the Kairos Power Hermes site, I am totally supportive of the construction and operation of this vital facility. My residence is also 5-6 miles from the High Flux Isotope Reactor at ORNL, which started operation in the 1960's and now operates at a thermal power of 85MW, more than double the Hermes Reactor thermal power. The safety regulations of the DOE have ensured that HFIR has operated with no significant environmental effect and, in fact, is viewed as a major asset by the community. I have confidence that the regulations of the NRC will, likewise, ensure that the Hermes Reactor is operated to high standards under the NRC's practiced and experienced regulatory process. Moreover, the inherent safety features of the Hermes Reactor minimize the potential for any environmental impact.

Comment No. 3:

The Hermes is being sited at the former location of the Oak Ridge Gaseous Diffusion Plant that had the capability to consume over 2000 MW(e) largely for powering compressors in the gaseous diffusion process. Heat of compression was eventually discharged to the environment, primarily through evaporative cooling towers. The discharge of 35 MW of thermal energy by the Hermes Reactor to the atmosphere is, by comparison, a trivial impact. The original ORGDP heat discharge did not have a significant thermal impact on the air or adjoining waterways.

Comment No. 4:

Global climate change is real. (See Comment No. 1) The Hermes Reactor is an enabler of one of the family of solutions that the planet will require to address the climate challenge to humanity without denying billions the right to economic development and prosperity. The leverage of Hermes is immense in this quest for sustainable energy. The NRC licensing process (and most particularly the Environmental Impact Statement) should reflect that implementing the Hermes Reactor is an urgent action for the benefit of the environment and we who live within it.

Thank you for the opportunity to comment.