



demonstrated to meet or even surpass traditional He-3-based detectors.

According to LANL, ICONS can detect

anything from individual background neutrons up to extremely intense neutron fluxes without losing accuracy.

MICROREACTORS

UIUC submits MMR construction permit application

The University of Illinois–Urbana-Champaign, in partnership with Nano Nuclear Energy, has submitted a construction permit application to the Nuclear Regulatory Commission for construction of a Kronos micro modular reactor (MMR). This is the first major step in the two-part 10 CFR Part 50 licensing process for the research and test reactor.

UIUC intends to use the reactor to support training the nuclear workforce; drive public engagement around nuclear power; and conduct research exploring microreactor operations, systems, and broader viability.

According to Nano Nuclear, with this submission, the company has become the first commercially ready microreactor developer to submit a construction permit application.

Kronos is a high-temperature, gas-cooled reactor. Each TRISO-fueled and helium-cooled unit is designed to produce up to 15 MWe (45 MWt), and the reactor stores heat in



Nano Nuclear Energy has completed site characterization for its Kronos MMR in partnership with the University of Illinois. (Photo: Nano Nuclear)

molten salt tanks for steam generation.

It has been about 30 years since a U.S. university deployed a new research reactor. Abilene Christian University, Pennsylvania State University, Texas A&M University, and the University of Missouri are also pursuing campus reactors of different designs. ☒



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