

**NUCLEAR REGULATORY COMMISSION**

**[Docket No. 50-610; NRC-2022-0167]**

**Abilene Christian University**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Construction permit application; acceptance for docketing.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) staff accepts and docketed an application for a construction permit from Abilene Christian University (ACU) for a molten salt research reactor to be built in Abilene, Texas.

**DATES:** November 28, 2022.

**ADDRESSES:** Please refer to Docket ID **NRC-2022-0167** 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-2022-0167**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; email: Stacy.Schumann@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 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 email to PDR.Resource@nrc.gov. The ADAMS accession number

for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in this document.

- **NRC's PDR:** You may examine and purchase copies of public documents, by appointment, at the NRC's PDR, Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. To make an appointment to visit the PDR, please send an email to [PDR.Resource@nrc.gov](mailto:PDR.Resource@nrc.gov) or call 1-800-397-4209 or 301-415-4737, between 8:00 a.m. and 4:00 p.m. Eastern Time (ET), Monday through Friday, except Federal holidays.

- **NRC's Public Website:** The construction permit application is available under the NRC's ACU Construction Permit Application public website at <https://www.nrc.gov/reactors/non-power/msrr-acu.html>.

**FOR FURTHER INFORMATION CONTACT:** Richard F. Rivera, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-7190; email: [Richard.Rivera@nrc.gov](mailto:Richard.Rivera@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Discussion**

On August 12, 2022, Abilene Christian University (ACU) filed, pursuant to Section 104c. of the Atomic Energy Act and Part 50 of title 10 of the *Code of Federal Regulations* (10 CFR), "Domestic Licensing of Production and Utilization Facilities," an application (ADAMS Package Accession No. ML22227A201) for a construction permit for the molten salt research reactor (MSRR) (a "non-power reactor" as defined in 10 CFR 50.2), which would be located in Abilene, Texas. The MSRR would be a high-temperature reactor that uses molten fluoride-based fuel salt. A notice of receipt and availability of this portion of the application was published in the *Federal Register* on October 14, 2022 (87 FR 62463).

The MSRR construction permit application consisted of the following information:

- The general information required by 10 CFR 50.33,
- The Preliminary Safety Analysis Report required by 10 CFR 50.34(a), and
- Environmental Information as required by 10 CFR 51.41.

On September 27, 2022, the NRC staff notified ACU that it needed additional information and was pausing the docketing review to allow ACU the opportunity to supplement its construction permit application (ADAMS Package Accession No. ML22270A170). On October 14, 2022, ACU supplemented its construction permit application with additional information regarding the proposed MSRR's instrumentation and control system design (ADAMS Package Accession No. ML22293B816).

The NRC staff determined that the application, as supplemented, is acceptable for docketing under Docket No. 50-610. The NRC staff provided ACU notice of the determination that its application was acceptable for docketing by letter dated November 18, 2022 (ADAMS Accession No. ML22313A097).

The NRC staff will perform a detailed technical review of the construction permit application and document its safety findings in a safety evaluation report. Also, in accordance with 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," the NRC staff will conduct an environmental review of the proposed action.

Docketing of the application does not preclude the NRC from requesting additional information from the applicant as the review proceeds, nor does it predict whether the Commission will grant or deny the application. If the Commission finds that the construction permit application meets the applicable standards of the Atomic Energy Act and the Commission's regulations, and that any required notifications to other agencies and bodies have been made, the Commission will issue a construction permit,

in the form and containing conditions and limitations that the Commission finds appropriate and necessary.

The Commission will announce, in a future *Federal Register* notice, the opportunity to petition for leave to intervene on the construction permit application.

Dated: November 28, 2022.

For the Nuclear Regulatory Commission.

**/RA/**

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