



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

December 16, 2022

Dr. Rusty Towell  
Director of NEXT Lab  
Abilene Christian University  
ACU Box 27963  
Abilene, TX 79699

SUBJECT: ABILENE CHRISTIAN UNIVERSITY – MOLTEN SALT RESEARCH REACTOR  
CONSTRUCTION PERMIT APPLICATION REVIEW SCHEDULE AND  
RESOURCE ESTIMATE (EPID: L-2022-NFW-0002 AND L-2022-NFW-0003)

Dear Dr. Towell:

On November 18, 2022, the U.S. Nuclear Regulatory Commission (NRC) issued to Abilene Christian University (ACU) a letter<sup>1</sup> accepting the molten salt research reactor (MSRR) construction permit application for docketing and detailed technical review. The letter of acceptance and docketing provided an estimated completion date of May 2024. This letter provides a summary of the schedule and a resource estimate for the detailed review of the application. The table below provides intermediate milestones for both the safety and environmental reviews.

<b>Milestone Group – Safety Review</b>	<b>Estimated Completion</b>
Draft Safety Evaluation	August 2023
Advanced Safety Evaluation	January 2024
Final Safety Evaluation	May 2024

<b>Milestone Group – Environmental Review</b>	<b>Estimated Completion</b>
Draft Environmental Assessment <sup>2</sup>	October 2023
Final Environmental Assessment	April 2024

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<sup>1</sup>Agencywide Documents Access and Management System (ADAMS) Accession No. ML22313A097

<sup>2</sup>Upon completion of the environmental assessment, the NRC will determine whether to prepare an environmental impact statement (EIS) or a finding of no significant impact on the proposed action. If an EIS is needed, the NRC staff will work to mitigate impacts to the overall schedule.

The schedule is based on both historical review timelines and the NRC staff's judgement regarding the estimated level of effort involved for application review areas. The schedule is also based, in part, on ACU's commitment to provide its responses to Requests for Additional Information (RAIs) within 30 days after the issuance of the RAIs, as well as ACU's ability to provide support and respond to questions in a timely and organized manner during technical audits. The schedule accounts for audits as well as the issuance of one round of RAIs. To achieve this schedule, the NRC staff also intends to engage ACU frequently during the review to address schedule details and emerging technical issues. Delays in the NRC staff's receipt of necessary information could result in changes to the review schedule. The NRC staff requests that ACU informs the NRC in writing, as early as possible, should potential delays arise in its ability to provide necessary information.

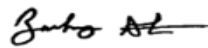
The NRC staff will conduct its safety-focused review based on the guidance in NUREG-1537, "Guidelines for the Preparation and Review of Applications for the Licensing of Non-Power Reactors," Part 1, "Format and Content" (ML042430055) and Part 2, "Standard Review Plan and Acceptance Criteria" (ML042430048) and ORNL Technical Report (ORNL/TM-2020/1478) "Proposed Guidance for Preparing and Reviewing a Molten Salt Non-Power Reactor application" (ML20219A771). As discussed in the acceptance letter<sup>1</sup>, the NRC staff identified several technical topics related to the MSRR application that will require additional focus from ACU and the NRC staff to achieve the forecasted schedule.

The forecasted schedule could change due to several factors, including the timeframe for resolution of technical issues, unanticipated changes to the scope of the review, unsolicited supplements to the application, design changes, and other factors.

Based on the pre-application activities and the information provided in ACU's submittal, the NRC staff has estimated that it will need approximately 15,000 NRC staff hours and approximately \$50,000 in contractor support to complete the safety and environmental reviews of the construction permit application. If there are emergent complexities or challenges in the NRC staff's review that would cause changes to the initial forecasted completion date or significant changes in the estimated resources, the reasons for the changes, along with the new estimates, will be communicated in writing to ACU.

If you have any questions, please contact Richard Rivera ([Richard.Rivera@nrc.gov](mailto:Richard.Rivera@nrc.gov)) at (301) 415-7190 or, Edward Helvenston ([Edward.Helvenston@nrc.gov](mailto:Edward.Helvenston@nrc.gov)) at (301) 415-4067. Questions that are specific to the environmental review may be directed to Patricia Vokoun ([Patricia.Vokoun@nrc.gov](mailto:Patricia.Vokoun@nrc.gov)) at (301) 415-3470.

Sincerely,



Stone, Zackary signing on behalf  
of Rivera, Richard  
on 12/16/22

Richard Rivera, Project Manager  
Advanced Reactor Licensing Branch 1  
Division of Advanced Reactors and Non-Power  
Production and Utilization Facilities  
Office of Nuclear Reactor Regulation

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 DATED: DECEMBER 16, 2022

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**NRR-106**

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DATE	12/15/2022	12/15/2022	12/15/2022	12/16/2022

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