

**From:** [Helvenston, Edward](#)  
**To:** [Ayman I. Hawari](#)  
**Cc:** [Colby Sorrell](#); [Gerald Wicks](#); [Hudson, Justin](#); [Borromeo, Josh](#); [Hardesty, Duane](#)  
**Subject:** NORTH CAROLINA STATE UNIVERSITY – ACCEPTANCE OF THE APPLICATION FOR A LICENSE AMENDMENT RE: FUELED EXPERIMENTS FOR THE PULSTAR RESEARCH REACTOR (EPID L-2022-NFA-0004)  
**Date:** Monday, August 15, 2022 5:25:00 PM

---

Dear Dr. Hawari:

By letter dated April 18, 2022 (Agencywide Documents Access and Management System (ADAMS) ML22108A168) and supplemented on July 11, 2022 (ADAMS ML22193A167), North Carolina State University (NCSU) submitted an amendment to Facility Operating License No. R-120 for the North Carolina State University PULSTAR Research Reactor. The license amendment request (LAR) proposes to amend NCSU's license conditions (LCs) and technical specifications (TSs) to allow it to increase the quantity of uranium-235 (U-235) in fueled experiments; to allow it to perform fueled experiments with other fissionable material in addition to U-235; and to allow it to perform vented fueled experiments. The amendment would also make other changes related to fueled experiments, including revising the TS definition of "fueled experiment", increasing the license possession limits for fissile materials to be used in fueled experiments, as well as some administrative changes to the TSs. NCSU stated that the amendment would allow the LCs and TSs to accommodate its planned experimental needs.

Consistent with Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.90, "Application for amendment of license, construction permit, or early site permit," an application to amend a license (including the technical specifications) must be filed with the Commission, as specified in 10 CFR 50.4, "Written communications." The application must fully describe the changes desired, and follow, as far as applicable, the form prescribed for the original application. Section 50.34, "Contents of applications; technical information," of 10 CFR addresses the content of technical information required and stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

The U.S. Nuclear Regulatory Commission (NRC) staff performed an acceptance review of the LAR and concluded that it includes sufficient information for the NRC staff to begin its detailed technical review. Notwithstanding the acceptance review, the NRC staff may require additional information to complete the detailed technical review. If needed, the NRC staff will request this information by separate correspondence within approximately 60 days of the date of this letter.

Based on the acceptance review, and as discussed by telephone with Dr. Colby Sorrell of NCSU on August 15, 2022, the NRC staff has estimated that the review for this LRA will take approximately 500 hours to complete, and expects to complete its review and make a final determination on the LAR by nine months from the date of this email.

This date could change due to several factors, including requests for additional information, unanticipated changes to the scope of the review, unsolicited supplements to the LAR, and others. If the forecasted completion date changes or significant changes in the forecasted hours, the NRC staff will notify you in writing of the reasons for the changes along with the new estimates.

If you have any questions, please contact Justin Hudson at (301) 287-0538 or by electronic mail at [Justin.Hudson@nrc.gov](mailto:Justin.Hudson@nrc.gov), or me at (301) 415-4067 or by electronic mail at [Edward.Helvenston@nrc.gov](mailto:Edward.Helvenston@nrc.gov).

Sincerely,  
Ed

**Ed Helvenston, U.S. NRC**

Non-Power Production and Utilization Facility Licensing Branch (UNPL)  
Division of Advanced Reactors and Non-Power Production and Utilization Facilities (DANU)  
Office of Nuclear Reactor Regulation (NRR)  
O-12C07  
(301) 415-4067