

## **Reactor Cooling Infrastructure Improvements at the KSU TRIGA Reactor Facility**

**PI:** Alan Cebula, Kansas State  
University

**Collaborators:** N/A

**Program:** Fiscal Year 2024 Scientific  
Infrastructure Support for Consolidated  
Innovative Nuclear Research –  
University Research Reactor Upgrades

---

### **ABSTRACT:**

The objective of this project is to acquire reactor cooling related equipment to replace aging and deprecated equipment. Major cooling system components such as cooling towers, heat exchanger, and pumps will be replaced along with piping. Cooling system maintenance will be improved by updating the side stream filtration. Through refurbishment and updates of the system, heat removal capacity will be restored to allow long term operations at 1 MW power. In addition to restoring cooling capacity, lengthy reactor outages which would be needed to replace failed cooling system components required for reactor operation would be avoided. By completing the objective, we will achieve a goal to enhance research and teaching through a more operationally reliable research reactor facility. With increased reliability, the facility can expand its role in education by offering additional courses to students and have more availability for research requests.