

Reactor Cooling System Upgrades at Kansas State University TRIGA Reactor

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Collaborators: NA

Program: Minor Reactor Infrastructure

ABSTRACT:

Project Description and Objectives:

This project seeks to improve the reliability of the Kansas State University TRIGA Reactor by performing three important upgrades. The reactor primary coolant pump, which is 50 years old, will be replaced with a new unit with a higher power. The higher power pump will improve the flow rate and increase heat transfer to the secondary coolant, which will allow the reactor to maintain higher power levels without reaching water temperature limits. A new water radiation monitor and remote display unit will be installed in the primary coolant water sampling volume to allow early detection of fission products released from the reactor fuel. Finally, the secondary coolant expansion tank, which is 50 years old and badly corroded, will be replaced with a new unit to improve chemistry control and the lifetime of the secondary cooling system components.