Infrastructure Enhancements in Support of Safety and Operational Reliability at the WSU TRIGA Reactor

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Collaborators: N/A

Program: University
Research Reactor Upgrades
Infrastructure Support

ABSTRACT:

Project Objectives. The Nuclear Science Center at Washington State University operates the State of Washington's only research reactor and supports vibrant teaching, training, and research programs in support of many projects in nuclear science education and research. The objective of this project is to enhance the safety and operational reliability by replacement of the overhead gantry crane and addition of an underwater lighting system for the reactor pool areas. Together, these upgrades will further our mission to teach, perform research, and serve the nuclear science communities within and outside of WSU.

Project Description and Impact. The 6-ton overhead crane is utilized multiple times each week by the reactor staff for maintenance operations and inspections. Students and staff utilize the overhead crane in their daily activities in support of project deliverables to clients within WSU, DOE, and others. This project aims to replace the 62 year old crane as it is not operationally reliable and no commercial off the shelf part exist for repairs.

An underwater pool illumination system would be advantageous for tours, teaching, and maintenance operations as the reactor sits underneath a large amount of water in the reactor pool, and is currently not illuminated well, or at all in most places. This project seeks to add permanent underwater lighting systems to each side of the reactor pool to fully illuminate the structure and work areas. Enhanced visualization of these areas will further enhance the student learning experience and increase the safety and operational reliability of the reactor facility in performance of maintenance and inspections.