

# DOE-ID NEPA CX DETERMINATION

## SECTION A. Project Title: Development of Neutron Tomography at the UWNR – University of Wisconsin

## SECTION B. Project Description

The University of Wisconsin (UW) proposes to enhance the neutron radiography capabilities at the UW Nuclear Reactor (UWNR) and associated Characterization Laboratory for Irradiated Materials (CLIM), by acquiring a high-resolution detector, rotation stage, visualization software and a high-performance computer. The UWNR neutron source is a 1-MW nuclear reactor. The proposed detector system is a custom-built detector system including the delay line imaging readout, the neutron sensitive multichannel plates, the software to control it, the vacuum flange mounting, as well as final assembly. The proposed project represents the first stage of UW's longer-term plan to establish tomographic neutron imaging (NI) capabilities to complement the X-ray imaging facility that was recently installed. The proposed upgrade will strengthen the UWNR's impact on nuclear science and engineering research and education by expanding the capabilities that are offered to users of the facility by developing a Neutron Tomography Imaging system. Project activities will also enhance the on-going outreach and education activities of the UWNR. The CLIM is a Nuclear Science User Facilities (NSUF) facility and collaborations with other universities and institutions for the use of this facility through the NSUF proposal process is encouraged.

## SECTION C. Environmental Aspects / Potential Sources of Impact

The university has procedures in place to handle any waste that will be generated through this project. The action would not create additional environmental impacts above those already occurring at the university.

## SECTION D. Determine the Level of Environmental Review (or Documentation) and Reference(s): Identify the applicable categorical exclusion from 10 CFR 1021, Appendix B, give the appropriate justification, and the approval date.

Note: For Categorical Exclusions (CXs) the proposed action must not: 1) threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, and health, including requirements of DOE orders; 2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities; 3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; 4) adversely affect environmentally sensitive resources. In addition, no extraordinary circumstances related to the proposal exist which would affect the significance of the action, and the action is not "connected" nor "related" (40 CFR 1508.25(a)(1) and (2), respectively) to other actions with potentially or cumulatively significant impacts.

References: B2.2 Installation of, or improvements to, building and equipment instrumentation (including, but not limited to, remote control panels, remote monitoring capability, alarm and surveillance systems, control systems to provide automatic shutdown, fire detection and protection systems, water consumption monitors and flow control systems, announcement and emergency warning systems, criticality and radiation monitors and alarms, and safeguards and security equipment).

Justification: The activity consists of the acquisition and installation of equipment to enhance the research capabilities of the UWNR.

Is the project funded by the American Recovery and Reinvestment Act of 2009 (Recovery Act)  Yes  No

Approved by Jason Anderson, DOE-ID NEPA Compliance Officer, on 07/23/2021.