DOE-ID NEPA CX DETERMINATION

CX Posting No.: DOE-ID-20-014

SECTION A. Project Title: Enhancing Mechanical Testing Capabilities to Support High-throughput Nuclear Material Development – Auburn University

SECTION B. Project Description

Auburn University proposes to acquire two instruments to expand research capabilities in materials and mechanical engineering to support high throughput alloy development and advanced manufacturing for nuclear applications. The instruments are 1) a Nanovea integrated micro- and nano-indentation platform with high-temperature capability covering mesoscale to microscale high-throughput mechanical evaluation to support further development of indentation techniques to study irradiated materials, and 2) a Correlated Solutions VIC-3D digital image correlation (DIC) system supporting development of a high-throughput mechanical testing procedure to maximize neutron test efficiency. The new equipment will improve the current research and training opportunities at Auburn and expand the existing nuclear research and education programs. The equipment will be placed in a shared user facility to promote public use.

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: B1.31 Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts.

Justification: The activity consists of purchasing and installing equipment to support high-throughput nuclear material development.

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

Approved by Jason Sturm, DOE-ID NEPA Compliance Officer on 07/20/2020