

DOE-ID NEPA CX DETERMINATION

SECTION A. Project Title: General Scientific Infrastructure Support for Innovative Nuclear Research at the University of Idaho

SECTION B. Project Description

The University of Idaho proposes to enhance the viability and competitiveness of the Nuclear Program through the acquisition and upgrade of scientific infrastructure to strengthen the universities capabilities in three different aspects of the program: Thermal Hydraulics, Materials, and Chemical Engineering. This will be accomplished by:

1. Develop and build a test facility to measure the effect of pressure and thermal cycling of printed circuit heat exchangers (PCHEs) or other heat exchangers in their appropriate temperature and pressure ranges, simulating the increase and decrease of temperature as systems come up to operating conditions and then shut down.
2. Upgrade of an existing static autoclave testing system with a high pressure re-circulation flow loop, loading train, and required instrumentation for fatigue crack growth and stress corrosion cracking of structural materials used in nuclear reactors. The system will be used to test steels and Ni-based alloys in simulated boiling water reactor conditions without contaminating the high temperature water with corrosion products.
3. Acquire a modified thermogravimetric analysis (TGA) system to measure adsorption isotherms for various systems including non-radioactive isotopes of fission products on graphite and graphitic materials.

SECTION C. Environmental Aspects / Potential Sources of Impact

The action consists of purchasing equipment to be used in research and teaching. 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 for teaching and research purposes.

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 4/6/2017