

# DOE-ID NEPA CX DETERMINATION

**SECTION A. Project Title: Enhancement of Radiation Safety and Radiological Monitoring Systems for the Ohio State University Nuclear Reactor**

**SECTION B. Project Description**

The objective of this project is for the Ohio State University to upgrade outdated infrastructure critical to safe operation of the OSU Research Reactor and the OSU Nuclear Reactor Laboratory. This will be accomplished by purchasing replacement stainless steel benches and carts, a shielding cave, glove box, area radiation monitoring system, smear counter, survey meters, and fire extinguishers.

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

**Radioactive Material Use** – The purchase of radiation safety equipment will include the purchase of calibration sources for use with the equipment. These sources are exempt quantity, so no radiation license is required (although OSU has a broad-scope license from the State of Ohio under which non-exempt sources can be licensed). The action consists of funding the purchase of additional pieces of equipment and instruments that the university already uses for an existing program. The action would not create additional environmental impacts above those already occurring at the university.

**Chemical Use/Storage** – The cocktail solution for the scintillation counter consists of small amounts of biodegradable chemicals that will be used and disposed. The Radiation Safety Office at OSU uses such cocktail solution regularly without issue. The amount of cocktail on site at any time should be a gallon or less, and only a few ml are used and disposed at a time.

**Chemical Waste Disposal** – See above.

**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, announcement and emergency warning systems, criticality and radiation monitors and alarms, and safeguards and security equipment).

**Justification:** The activity consists of purchasing and upgrading equipment for operational and research purposes.

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

Approved by Jack Depperschmidt, DOE-ID NEPA Compliance Officer on 5/21/2012