DOE-ID NEPA CX DETERMINATION

CX Posting No.: DOE-ID-21-034

SECTION A. Project Title: Advancing Radiation Detection Education at the Maryland University Training Reactor – University of Maryland

SECTION B. Project Description

The University of Maryland (UMD) proposes to replace the Radiation Area Monitors (RAMs) for the Maryland University Training Reactor (MUTR). The RAMs are required for reactor operations and the current system is an Eberline RMS-II installed sometime in the 1980s. UMD will also acquire radioactive contamination detection equipment. This will include a portable Continuous Air Monitor (CAM) for monitoring experimental areas for possible airborne releases of radioactive material. A Portal Monitor will be placed at the primary exit from the reactor building for checking for radioactive contamination on personnel. A wipe test counter for performing removable contamination surveys will also be purchased. UMD will also purchase new handheld radiation survey instruments including ion chambers, neutron detectors, and Geiger counters. A replacement glovebox used to handle the radioactive samples produced by neutron activation will be purchased. Lab kits for the Radiation Facilities' Radiation Detection and Measurement class will be procured. Ion chambers and an electrometer will also be acquired. The equipment purchased will be used to effectively monitor and protect against unnecessary radiation exposure or contamination. This will create a safer environment that is more conducive to education and research.

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. Three of the radiation detectors to be purchased are equipped with calibration sources. The University of Maryland Radiation Facilities are currently responsible for other calibration sources and work with Radiation Safety for their safe storage.

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 purchase of equipment that will be used to effectively protect against unnecessary radiation exposure or contamination through more reliable monitoring, data logging, and better methods of preventing and detecting airborne and removable contaminants.

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.