DOE-ID NEPA CX DETERMINATION

CX Posting No.: DOE-ID-11-022

SECTION A. Project Title: An Integrated Upgrade of Scientific Equipment for Strengthening the Research and Education in Nuclear Energy at the Ohio State University

SECTION B. Project Description

The overall goal of this project is to acquire equipment/instrumentation that will be integrated into the existing infrastructure at the Nuclear Engineering program at the Ohio State University to help improve capabilities in research and education. To accomplish this, the following equipment will be purchased and operated:
- Deep level transient spectroscope for in-core neutron sensor evaluation
- Helium compressor for high-temperature helium test facility
- Full-scope nuclear power plant simulator
- Test facility for digital I&C systems in nuclear power plants
- Optical backscatter reflectometer for fiber optics testing
- Equipment for enchaining nuclear engineering lab course teaching

SECTION C. Environmental Aspects / Potential Sources of Impact

Radioactive Material Use – The GaN sample will be irradiated using the Research Reactor at the Ohio State University. The sample will become radioactive after neutron irradiation. There is no long-lived radionuclide generated, and the post-irradiation experiment will be performed after the sample has been "cooled", i.e., no significant residual radioactivity will be left.

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: B3.6 Siting, construction, modification, operation, and decommissioning of facilities for small-scale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial development.
B1.2 Training exercises and simulations (including, but not limited to, firing-range training, small-scale and short-duration force-on-force exercises, emergency response training, fire fighter and rescue training, and decontamination and spill cleanup training) conducted under appropriately controlled conditions and in accordance with applicable requirements.

Justification: The activity consists of purchasing 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 Jack Depperschmidt, DOE-ID NEPA Compliance Officer on 11/28/2011