

DOE-ID NEPA CX DETERMINATION

SECTION A. Project Title: Nuclear Engineering and Science Equipment to Enhance Education and Research in Nuclear and Radiological Engineering at the Georgia Institute of Technology

SECTION B. Project Description

The Georgia Institute of Technology will address three areas with this project:

- Enhancement in capabilities of an existing neutron generator through the addition of a pneumatic tube irradiation system, a shielded gamma spectrometry system, and glove box with additional barriers for sample controls
- Addition of a mass spectrometer gas analysis unit to enhance research capabilities in the nuclear materials program
- Addition of a thermal evaporator system to enhance the research capabilities in the area of neutron detection

SECTION C. Environmental Aspects / Potential Sources of Impact

Radioactive Material Use/Radioactive Waste Generation –The neutron generator will activate materials to low levels for neutron activation assessment and analysis facilitated with a rabbit tube/glove box system, and activities can be expected to average a microcurie or lower. The Radiation Safety Office supports all laboratory operations. Waste management handles disposal under Georgia Tech’s radioactive materials licenses using existing, in-place process and safe disposal practices.

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.

Justification: The activity consists of purchasing equipment for research and academic 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 5/22/2012