

# DOE-ID NEPA CX DETERMINATION

**SECTION A. Project Title: Experimental Validation of UO<sub>2</sub> Microstructural Evolution for NEAMS tool MARMOT – University of Florida**

**SECTION B. Project Description**

The University of Florida will experimentally validate the NEAMS tool for the computer model MARMOT. Surrogate oxide (CeO<sub>2</sub>) and depleted uranium oxide (UO<sub>2</sub>) will be used for this study and will be formed into pellets of various types then characterized.

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

The depleted UO<sub>2</sub> (2.5kgs or less), will be stored in a shielded vault handled by certified radiological personnel. Radiological wastes will be managed by the University's Radiation Control Office. All chemicals will be used and disposed of in accordance with all university procedures. The action will 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: 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 creating surrogate pellets for characterization and subsequent validation of computer simulations.

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 08/18/2014