

DOE-ID NEPA CX DETERMINATION

SECTION A. Project Title: Acquisition of an Automated Pneumatic Sample Transfer System for Neutron Irradiation at the University of Florida Training Reactor – University of Florida

SECTION B. Project Description

The University of Florida (UF) proposes to acquire an automated pneumatic sample transfer system for the University of Florida Training Reactor (UFTR). The UFTR is a 100 kW Argonaut-type reactor that began operation in 1959. Acquisition of an automated pneumatic transfer system will enable the UFTR to offer an increased suite of capabilities, such as short irradiations, which are best suited for production of short-lived radioisotopes for laboratory use, neutron activation analysis, analysis of reactor core characteristics such as flux and neutron energy spectrum, course instruction on radioactive materials preparation and handling and a host of other activities that are routinely carried out at university research reactor facilities. There are synergistic equipment and capabilities at the UFTR facility, which include nuclear detection instruments such as two Canberra HPGe detectors, a hot cell which is equipped with remote manipulators for handling high radioactivity samples, transfer casks for managing high activity samples, and nearby radiochemistry instruments and laboratory space available for use. The UF Nuclear Fuel and Structural Material (NFSM) research center, which is also a Nuclear Science User Facilities (NSUF) partner facility, is located in the same building, adjacent to the UFTR facility. Additional materials testing instruments have been installed within the UFTR facility, for the purpose of carrying out experiments on irradiated materials. The UFTR is used for teaching and research purposes, including courses where the reactor is the focal point of the course.

SECTION C. Environmental Aspects / Potential Sources of Impact

The sample transfer system will be used to irradiate samples in the UFTR, which will make the samples radioactive. Samples will be generally less than 1 mCi activity. The UF Radiation Safety Office has authority over radioactive materials use and management and disposal of radioactive materials.

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: B1.31 Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts.

Justification: The activity consists of the acquisition, installation, and testing of a pneumatic sample transfer system to increase the quality of research reactor operations.

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 07/26/2021.